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HOW TO CHOOSE THE SITE FOR A COUNTRY HOUSE, is a subject now occupying the thoughts of many of our countrymen, and therefore is not undeserving a few words from us at the present moment.

The greater part of those who build country seats in the United States, are citizens who retire from the active pursuits of town to enjoy, in the most rational way possible, the fortunes accumulated there—that is to say, in the creation of beautiful and agreeable rural homes.

Whatever may be the natural taste of this class, their avocations have not permitted them to become familiar with the difficulties to be encountered in making a *new* place, or the most successful way of accomplishing all that they propose to themselves. Hence, we not unfrequently see a very complete house surrounded, for years, by very unfinished and meagre grounds. Weary with the labor and expense of levelling earth, opening roads and walks, and clothing a naked place with new plantations, all of which he finds far less easily accomplished than building brick walls in the city, the once sanguine improver often abates his energy, and loses his interest in the embellishment of his grounds, before his plans are half perfected.

All this arises from a general disposition to underrate the difficulty and cost of making plantations, and laying the groundwork of a complete country residence. Landscape gardening, where all its elements require to be newly arranged, where the scenery of a place requires to be almost wholly created, is by no means either a cheap or a rapid process. Labor and patience must be added to taste, time and money, before a bare site can be turned into smooth lawns and complete pleasure grounds.

The best advice which the most experienced landscape gardener can give an American about to select ground for a country residence, is, therefore, to choose a site where there is *natural wood*, and where nature offers the greatest number of good features ready for a basis upon which to commence improvements.

We have, already, so often descanted on the superiority of trees and lawns to all other features of ornamental places united, that our readers are not, we trust, slow to side with us in a thorough appreciation of their charms.

Hence, when a site for a country place is to be selected, (after health and good neighborhood,) the first points are, if possible, to secure a position where there is some exist-

ing wood, and where the ground is so disposed as to offer a natural surface for a fine lawn. These two points secured, half the battle is fought, for the framework or background of foliage being ready grown, immediate shelter, shade, and effect is given as soon as the house is erected; and a surface well shaped for a lawn, (or one which requires but trifling alterations,) once obtained, all the labor and cost of grading is avoided, and a single season's thorough preparation gives you velvet to walk about upon.

Some of our readers, no doubt, will say this is excellent advice, but unfortunately not easily followed. So many are forced to build on a bare site, and "begin at the beginning."

This is no doubt occasionally true, but in nine cases out of ten, in this country, our own observation has convinced us that the choice of a poor location is the result of local prejudice, or want of knowledge of the subject, rather than of necessity.

How frequently do we see men paying large prices for indifferent sites, when at a distance of half a mile there are one or more positions on which nature has lavished treasures of wood and water, and spread out undulating surfaces, which seem absolutely to court the finishing touches of the rural artist. Place a dwelling in such a site, and it appropriates all nature's handiwork to itself in a moment. The masses of trees are easily broken into groups that have immediately the effect of old plantations, and all the minor details of shrubbery, walks, and flower and fruit gardens, fall gracefully and becomingly into their proper positions. Sheltered and screened, and brought into harmony with the landscape, these finishing touches serve in turn to enhance the beauty and value of the original trees themselves.

We by no means wish to deter those who have an abundance of means, taste, enthusiasm and patience, from undertaking the creation of entire new scenery in their country residences. There are few sources of satisfaction more genuine and lasting than that of walking through extensive groves and plantations, all reared by one's own hands—to look on a landscape which one has transformed into leafy hills and wood embowered slopes. We scarcely remember more real delight evinced by any youthful devotee of our favorite art, in all the fervor of his first enthusiasm, than has been expressed to us by one of our venerable Ex-Presidents, now in a ripe old age, when showing us, at various times, fine old forest trees, oaks, hickories, etc., which have been watched by him in their entire cycle of development, from the naked seeds deposited in the soil by his own hands, to their now furrowed trunks and umbrageous heads!

But it must be confessed, that it is throwing away a large part of one's life—and that too, more especially, when the cup of country pleasures is not brought to the lips till one's meridian is well nigh past—to take the whole business of making a landscape from the invisible carbon and oxygen waiting in soil and atmosphere, to be turned by the slow alchemy of ten or twenty summers' growth into groves of weeping elms, and groups of overshadowing-oaks!

Those, therefore, who wish to start with the advantage of a good patrimony from nature, will prefer to examine what mother Earth has to offer them in her choicest nooks, before they determine on taking hold of some meagre scene, where the woodman's axe and the ploughman's furrow have long ago obliterated all the original beauty of the landscape. If a place cannot be found well wooded, perhaps a fringe of wood or a background of forest foliage can be taken

advantage of. These will give shelter, and serve as a groundwork to help on the effects of the ornamental planter. We have seen a cottage or villa site dignified, and rendered attractive forever, by the possession of even three or four fine trees of the original growth, judiciously preserved, and taken as the nucleus of a whole series of belts and minor plantations.

There is another most striking advantage in the possession of considerable wooded surface, properly located, in a country residence. This is the seclusion and privacy of the walks or drives, which such bits of woodland afford. Walks, in open lawn, or even amid belts of shrubbery, are never felt to have that seclusion and comparative solitude which belong to the wilder aspect of woodland scenes. And no contrast is more agreeable than that from the open sunny brightness of the lawn and pleasure grounds, to the retirement and quiet of a woodland walk.

Again, it is no small matter of consideration to many persons settling in the country, the production of picturesque effect, the working out a realm of beauty of their own, without any serious inroads into their incomes. One's private walks and parterres, unluckily, cannot be had at the cost of one's daily bread and butter—though the Beautiful overtops the useful, as stars outshine farthing candles. But the difference of cost between keeping up a long series of walks, in a place mainly composed of flower garden, shrubbery and pleasure grounds, compared with another, where there are merely lawns and sylvan scenery, is like that between maintaining a chancery suit, or keeping on pleasant terms with your best friend or favorite country neighbor. Open walks must be scrupulously neat, and broad sunshine and rich soil make weeds grow, faster than a new city in the best "western diggins," and your gardener has no sooner put the series of walks in perfect order, than he looks over his shoulder, and beholds the enemy is there, to be conquered over again. On the other hand, woodland walks are swept and repaired in the spring, and like some of those gifted individuals, "born neat," they require no more attention than the rainbow, to remain fresh and bright till the autumn leaves begin to drop again.

Our citizen reader, therefore, who wishes to enjoy his country seat as an elegant sylvan retreat, with the greatest amount of beauty and enjoyment, and the smallest care and expenditure, will choose a place naturally well wooded, or where open glades, and bits of lawn, alternate with masses or groups, and, it may be, with extensive tracts of well grown wood. A house once erected on such a site, the whole can very easily be turned into a charming labyrinth of beautiful and secluded drives and walks. And as our improver cultivates his eye and his taste, nature will certainly give him fresh hints; she will tell him how by opening a glade here, and piercing a thicket there, by making underwood occasionally give place to soft turf, so as to show fine trunks to the greatest advantage, and thereby bringing into more complete contrast some wilder and more picturesque dell, all the natural charms of a place may be heightened into a beauty far more impressive and significant than they originally possessed.

Why man's perception of the Beautiful seems clouded over in most uncultivated natures, and is only brought out by a certain process of refining and mental culture, as the lapidary brings out, by polishing, all the rich play of colours in a stone that one passes by as a common pebble, we leave to the metaphysicians to explain. Certain it is, that we see, occasionally, lamentable proofs of the fact in the treatment of na-

ture's best features, by her untutored children. More than one instance do we call to mind, of settlers, in districts of country where there are masses and great woods of trees, that the druids would have worshipped for their grandeur, sweeping them all down mercilessly with their axes, and then planting with the supremest satisfaction, a straight line of paltry saplings before their doors! It is like exchanging a neighborhood of proud and benevolent yeomanry, honest and free as the soil they spring from, for a file of sentinels or *gens d'armes*, that watch over one's out-goings and incomings, like a chief of police!

Most happily for our country, and its beautiful rural scenery, this spirit of destruction, under the rapid development of taste that is taking place among us, is very fast disappearing. "Woodman, spare that tree," is the choral sentiment that should be instilled and taught at the agricultural schools, and re-echoed by all the agricultural and horticultural societies in the land. If we have neither old castles nor old associations, we have at least, here and there, old trees that can teach us lessons of antiquity, not less instructive and poetical than the ruins of a past age.

Our first hint, therefore, to persons about choosing a site for a country place, is, in all possible cases, to look for a situation where there is some natural wood. With this for the warp—strong, rich, and permanent—you may embroider upon it all the gold threads of fruit and floral embellishment with an effect equally rapid and successful. Every thing done upon such a groundwork will tell at once; and since there is no end to the delightful task of perfecting a country place, so long as there are thirty thousand species of plants known, and at least thirty millions of varied combinations of landscape scenery possible, we think there is little fear that the possessor of a country place will not find enough to employ his time, mind, and purse, if he really loves the subject, even though he find himself in possession of the fee-simple of a pretty number of acres of fine wood.

But we have already exhausted our present limits, and must leave the discussion of other points to be observed in choosing a country place, until a future number.

REMARKS ON GARDENING AS A SCIENCE.—No. 6.

BY DR. WM. W. VALK, FLUSHING, L. I.

We concluded our No. 5, by observing that "water was the instrument by which all manuring substances are brought into a condition to furnish the liquid aliment that is absorbed by the roots of a plant, and which we term sap."

It is quite certain, that in *dry* ground, whatever be its condition as respects manure or vegetable earth, no plant can continue to thrive. For this reason, persons might be apt to suppose, that water *dissolves* the manure, and conveys it in the state of a liquid to the roots; and such, or something very like it, was the received opinion of early cultivators. But good soil, that which is fit for the purposes of nutrition, will not dissolve; it will not yield colouring matter to water. Therefore, we conclude that the plant, under the stimulus of solar light, (which also operates on the ground, and is *absorbed*—not extinguished,) *decomposes* the water that exists in the soil, and thus induces an electric current, which in its turn decomposes the manure, and

converts it into primary raw sap. What this sap may be, it is probable we shall never be able to determine with precision; but the suggestion may be ventured, that the elements of water are thus developed, which combine instantly, in the form of the purest water, depositing the carbon in the soil. We do not mean to say that *all* the carbon of the manure, or vegetable earth, is deposited; a portion may be, and very probably is, dissolved at the moment of the extrication of both, by an equivalent portion of hydrogen; but what we assert is this—that water does not act as a direct solvent of manure, no such thing as dissolved liquid manure being taken up, nutrimentally, by the roots; and that sap, be it simply aqueous, or a compound of water and some hydro-carbon, is the secondary result of an electrolytic process, nearly allied to galvanism.

If the views expressed be correct, there will be no difficulty in accounting for the darker hue assumed by ground under crop, for the carbon being deposited, remains in it.

In the Journal of the Royal Agricultural Society, page 250, Dr. DAUBENY, in a lecture on manures, believes with LIEBIG, that humus, "during the whole period of its decay, until it has reached that ultimate point at which it ceases to be soluble, and has become a kind of *caput mortuum*, goes on continually disengaging carbonic acid; so that the roots of plants fixed in humus of this quality, are surrounded by an atmosphere of the gas in question, which is therefore held in solution by the water taken up by them as sap." But the proof is here wanting that carbonic acid is so dissolved. Is it not far more likely that, if this aerial acid be produced, it passes at once into the atmosphere, and thence is taken into the vegetable organization by the leaves, to be converted into specific fluids and woody fibre?

Water certainly does act as a solvent, but not of vegetable mould; as *rain*, it conveys into the earth, with every shower, a certain quantity of *ammonia*, which is a saline substance of *extreme utility in vegetation*. On this subject, LIEBIG thus expresses himself: "Any one may satisfy himself of the presence of ammonia in rain, by simply adding a little sulphuric acid to a quantity of rain-water, and evaporating this nearly to dryness in a clean porcelain basin. The ammonia remains in the residue in combination with the acid, and may be detected by a little powdered lime, which separates the ammonia, and thus renders its peculiar pungent smell sensible. The sensation which is perceived upon moistening the hand with rain-water, so different from that produced by distilled water, and to which the term *softness* is vulgarly applied, is also due to the carbonate of ammonia contained in the former."

"The ammonia which is removed from the atmosphere by rain and other causes, is as constantly replaced by the putrefaction of animal and vegetable substances." "It is worthy of observation, that the ammonia contained in rain and snow water, possesses an offensive smell of perspiration and animal excrements—a fact which leaves no doubt respecting its origin." To how many gardeners and horticulturists is this fact familiar?

We shall have occasion to say more of ammonia, when we consider the products of vegetables; it will suffice now to remark, that nature has herein provided a corrector of what would, like atmospheric carbonic acid, become a deadly nuisance, and, by bringing down ammonia with the rain, converts it into a solvent of vegetable manure, fitted for laboration by the vital principle.

This ammonia, and also the potassa in loams, and other saline substances, are actually dissolved by water, and thus duly conveyed by the absorbents of the roots into the *organism.*

Rain-water collected in cisterns lined with *cement*, becomes rather hard, because some of its ammonia is abstracted, a defect easily remedied by the addition of a small quantity of this salt to such water. Common hard water from wells contains calcareous matter dissolved by an excess of carbonic acid. By exposure to the air, some of this acid escapes, carbonate of lime, (chalk) is deposited, and the water is improved; but for horticultural purposes, nothing can be compared to the water from rain, which flows through pastures into a pond which has a clay bottom. It is soft, replete with every soluble matter adapted to the nourishment of plants, and far preferable to any that can be obtained from artificial confined depositories. Possessing a natural fluid of so excellent a quality, the gardener will have no occasion to trouble himself with manure-water or any other offensive compounds, the results of which, to say the best of them, are ever doubtful, and certainly, in very many instances, positively pernicious or fatal.

Air. Atmospheric air must at least be considered as important to vegetable life, though not so vitally essential to plants as to animals; for in fact its direct operation has not yet been clearly made out. To investigate the agency of the atmosphere with any degree of satisfaction, its *composition* must be properly understood. Chemically speaking, one hundred volumes of air consists of twenty-one volumes of oxygen gas, and seventy-nine volumes of nitrogen gas, not in chemical union, but simply mixed. It also contains varying proportions of aqueous vapor and carbonic acid. Oxygen gas possesses an extensive range of affinity, and it is obvious, that were it alone to constitute our atmosphere, and left unchecked to exert its powerful effects, all nature would soon be one scene of universal destruction. It is on *this* account that nitrogen is present in so large proportion. Possessing no disposition to unite with oxygen, it is peculiarly adapted for this purpose, and exerts no action upon the processes proceeding on the earth.

The aqueous vapor and carbonic acid gas materially modify the properties of the air. The former falls upon the earth as rain, and brings with it any soluble matter which it meets with in its descent; the latter performs a *most important part* in the process of vegetable nutrition.

Carbonic acid, water, and *ammonia* are the final products of the decay of animal and vegetable matter. In an isolated condition, they usually exist in the form of gas. Hence, on their formation, they must escape into the atmosphere. But ammonia has not hitherto been enumerated among the constituents of the air, although, according to our view, (Liebig) it can never be absent. The reason of this is, that it exists in extremely minute quantity in the amount of air usually subjected to experiment; it has consequently escaped detection. But rain which falls through a large extent of air, carries down in solution all that remains in suspension in it. Now ammonia always exists in rain water, and from this fact we must conclude that it is invariably present in the atmosphere.

Such are the principal constituents of the air, from which plants derive their nourishment, and of which more will be said in our next.

Wm. W. Valk, M. D.

Flushing, L. I., Nov. 1847.

HOW TO RAISE PEAR SEEDLINGS.

BY ROBERT NELSON, OF NEWBURYPORT, MASS.

The United States of America will, no doubt, soon take the highest rank among the fruit growing countries. Soil and climate are, in no other part of the world, better adapted to all different kinds of fruit; the annually increasing number of horticultural societies, which in a praiseworthy manner distribute premiums, and excellent works in all branches of gardening, daily improve the knowledge and taste of the horticultural public.

Many persons, hitherto unacquainted with the culture of trees, are now going into the orchard and nursery business, attracted by the facility in raising apples and peaches. But there is a general want of and demand for pears.

Every nurseryman knows the difficulty in keeping the pear seedlings through the first winter, particularly in New-England, where the severe frost commonly throws the feeble seedlings out of the ground, and destroys them.

In order to prevent this evil, many nurserymen mix pear and apple seeds together, that the curled apple roots may twine themselves around the tap roots of the pears, and thus keep them in their places in the ground; other persons put the pear seedlings into a cellar, or protect them some other way, but not with the best success.

A large part of the labor of many gardeners and nurserymen is, I think, worse than thrown away, owing to their want of scientific knowledge in botany and gardening. Every thing in the vegetable kingdom is governed by fixed laws, and in order to be successful in the cultivation of plants, we must study their laws, instead of proceeding at random. The volume of nature is spread open before us, and serves to invite us to continual observation and deduction for practical uses.

Many persons, I am sure, when in winter walking through a forest, will have noticed, that where dry leaves are occasionally placed in a thick layer, the frost has but very little influence on the ground, if any at all. To those nurserymen who have raised their pear seedlings in the common way, and are anxious for keeping them through the winter, I must strongly recommend to cover them with dry leaves, say about one foot thick, and to throw some brushwood over, to prevent the same from being blown away. There is not the least doubt, but that this protection will answer for pear seedlings, as I often have seen beds of *Gladiolus cardinalis*, *Fuchsia coccinea*, and other tender roots, by this means sufficiently protected against very severe frost. And even if the frost should reach the roots, the leaves will prevent the destructive influence of any sudden change of weather, and keep out the sun, which is of the greatest importance.

Weary with the difficulties that seem to stand in the way in raising pear seedlings, most American nurserymen import them from England or France.

After being transplanted, the pear seedlings will do very well, (if it is performed in spring,) and the next winter will not injure them. What is the reason? I need hardly mention as the reason, that they, after having lost their tap-root, are forced to push out lateral roots, and are not afterwards liable to the same injury by frost. And why wait until the second year to perform this operation?

As the great object is, to make them branch out their roots as soon as possible, several European nurserymen recommend "tapping." This operation is to be done when the seedlings have attained a height of four or six inches, by two men with sharp spades, put in at the same time on both sides of the row, in a sloping direction, in order to cut off the tap root; but as it could not well be done before the summer is rather advanced, and even then seldom can be done properly, the season is too short for the seedlings to push out branching roots, strong enough to stand the following winter.

Having been a professional gardener and nurseryman in the north of Europe for nearly thirty years, I hope that my experience may be acceptable to many persons engaged in this business.

For several years, I succeeded in raising pears in a very simple way. I sowed the seed in the fall, as soon as gathered, in a garden bed, distributing them pretty thickly. The plants will easily come up in the spring, and as soon as they get four leaves, I take them up, cut off the tap root, and transplant them into beds or nursery rows of good soil, where the young plants soon will make lateral roots, and start nicely. I am not very particular as to exact length in cutting off the tap root, as I commonly take a dozen of plants or more in my hand, and cut off the roots at once at half length.

By thus increasing the number of mouths or feeders of the plants, they will grow excellently well. The branching roots now, having the whole summer before them, will be sufficiently strong to stand the winter, *even without protection*, and in the next summer, the *second*, they will be fit for budding.

Although this summer was unfavorable to the growth of pear seedlings, still all the neighboring nurserymen, who have seen my seedlings, have declared, that they "*never saw such branching roots on seedlings from last spring, even on the very best raised apple seedlings, and that their being thrown out by the frost would be almost impossible.*"

I have no doubt, that some old fashioned nurserymen will object, that this treatment is too violent for such feeble plants; but the result for several years has proved its practical value. "It is too much trouble," I hear some enemy of new inventions reply. It is some labor undoubtedly, but not half as much as to lift them out in the fall, keep them in the cellar through the winter, and plant them out again next spring. That is certainly too much trouble, and that will check the plants much more than their being tapped and transplanted when very young. In my method they are left undisturbed after their first transplanting, which is much easier performed than most persons may think, and of course they will continue their growth much better.

ROBERT NELSON.

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[Mr. NELSON's articles are always acceptable, since they are the result of sound theory and practice combined; and we commend the foregoing to those who have heretofore failed in rearing young pear stocks—the most precarious and difficult of all seedling fruit trees.

To grow them with success in the common mode, a *very deep soil*, inclining to dampness rather than dryness, is indispensable. We have no doubt that the mode of *forcing them to produce fibrous roots in abundance the first season*, which our correspondent recommends, which is new to us, by giving them greater firmness in the wood, and making them more dependent on the good surface soil than the tap-rooted seedlings are, will enable many cultivators to do successfully, what they have hitherto failed to do at all.—ED.]

THE ACCLIMATATION OF PLANTS.

BY THE EDITOR OF THE LONDON HORTICULTURAL MAGAZINE.

Johnson, in his "Principles of Gardening," treats this subject as seriously as if there were anything in it but a chimera; as if the constitution of a plant could be permanently altered; and after all, it is these great theorists who mislead themselves first, and their followers afterwards. In this case, there is no new fact adduced. The old humdrum tale about *Aucuba japonica* and *Pæonia moutan* having been stove plants, removed first to the green-house, and then out of doors, is of course resorted to as a presumed confirmation of the doctrine of the acclimatation of plants, as if it were fact instead of fiction.

So far as these illusions of great men induce experiment, they are not without their good effects. Mr. Johnson's error lies in presuming that the mere fact of a plant from a hot country being grown in the open air, is indicative or proof of a change of the plant or of its constitution, whereas it is nothing more than the proof of its qualities of endurance. He says, "Every plant has a peculiar temperature, without which its functions cease, but the majority of them luxuriate most in a climate of which the extreme temperatures do not much exceed 32 degrees and 90 degrees. No seed will vegetate, no sap will circulate at a temperature at or below the freezing point of water, yet the juices of the plant are not congealed at a temperature far more depressed; and I know of no other more satisfactory proof, that, like a cold blooded animal—the frog and the leech for example, it becomes torpid, though life is not extinct, unless excited by a genial temperature." Something very much bordering on our notions, which are founded on practice, may be found in Mr. Johnson's reasoning, but his conclusions are altogether opposed to us. He says, "no cultivation will render plants, natives of the torrid zone, capable of bearing the rigor of our winters, although their offspring reared from seed may be *rendered* much more hardy than their parents."

We quite agree with this, because we have shown and proved over and over again that cultivation will not change the powers of endurance either for heat or cold; but the steps which Mr. Johnson and other writers on acclimatation recommend, are perfectly right and proper to be taken, not as they allege, to acclimatise the plant, but to prove what it will endure.

If the British oak were cultivated in a stove, [hot-house of high temperature] it would no more be a stove plant for that operation, than a dog would be a horse for being kept in a stable; but an oak brought up in a stove, must not be planted out from the stove to the open ground in mid-winter, because the sudden check might kill it, and in all probability would kill it, though it is able to endure intense frost when properly managed. Therefore, all plants to be grown in the open air, ought to be raised in the open air, or if necessarily grown first in a stove, should be gradually, instead of suddenly brought to lower temperature.

Whoever can afford to lose plants, should try the experiment of their open air culture, because we may be growing in stoves and green-houses many subjects that would stand in the open ground in our winters. As Mr. Johnson very properly observes, "When a new plant arrives from tropical latitudes, it is desirable to use every precaution to avoid its loss; but so soon as it has been propagated from, and the danger of such loss is removed, from that moment ought experiments to commence;" but instead of saying, "*to ascertain whether its acclimatization is attainable*," which he does, he ought to say, to try what are its powers of enduring cold, because that and that only can have to be tried; it is worse than nonsense to talk of any change in the powers of the plant being attained. It is quite right to gradually bring the plant to its proper trial, and not to do any thing suddenly, because, as we have shown, the oak itself might be reared in a stove and grow there, and would be killed, if changed from thence to out of door growth in mid-winter. The nature of the plant is not changed; but it is the same with plants as

with animals—remove them from 90 degrees to 30 degrees in the same hour, and mischief must ensue.

The hardening off, as it is called, of all plants raised in heat, for planting in the open air, is quite requisite on all occasions, from the common annuals to dahlias. All are in practice submitted to the same process: first, by admitting more air than usual; then by removal to a cooler situation; lastly, perhaps to a cold frame which will merely keep out frost; although these things are to be planted out in our warm spring months, as the temperature is increasing instead of declining.

The reasoning of Mr. Johnson is good, and his advice is good, for on account of the much greater facility for cultivating hardy plants, the more we have capable of enduring our winters the better. "Hence," says the author of the "Principles of Gardening," "hence it is very desirable that an extended series of experiments should be instituted, to ascertain decisively whether many of our present green-house and stove plants could not endure exposure to our winters, if but slightly or not at all protected. It may be laid down as a rule, that all Japan plants will do so on the southern coast counties of England, but it remains unascertained to what degree of northern latitude in our island *this genial power of endurance extends.*" This last remark is in character with a practical man, for in truth that is the only inquiry to conduct: no possibility of changing the power of endurance exists; all we have to do, is to see what power the plant has, and there ends our task; we can then assign the plant to its proper station. Mr. Johnson says, "We all know the larch was once kept in a green-house, and within these few months, such South American plants, as *Tropœolum pentaphyllum* and *Gesnera douglasii*, have been found to survive our winters in our garden borders. Very true,; but the larch was no more a green-house plant for that fact, nor does the mere fact of surviving our winters in our garden borders in Scotland and Suffolk, or in Herefordshire, prove a jot towards the two plants being hardy. We remember very well seeing *Tacsonia pinnatistipula* flowering on Twickenham Common, in front of a cottage, by the side of *Tropœolum aduncum*, in the middle of January, yet the former is a tender plant, whatever the latter may be; but the winter accommodated itself to the plant, not the plant to the winter.

A registering thermometer alone can settle the question, as to how much frost the plant endures, or whether it endures any, and the thermometer ought not merely to be out of doors in the open air, but it should hang where the plant is; for we have seen the dahlia in full flower in one place, and cut down to the ground in another, not one hundred yards off. And then again it has to be considered whether a sudden change has not done more towards killing a plant, than the intensity of the frost; for it must be admitted that rapid changes from heat to cold, and vice versa, do more mischief in our winters than the actual cold would, if it came gradually and went gradually. We think nothing of the mere fact of plants once considered tender, being found hardy.

Mr. Johnson says: "Another fact is, that many tropical plants, of every order and species, have been found to require much less heat, both during the day and during the night, than gardeners of a previous century believed. Other plants than those already noticed have passed from the tropics to our parterres, and even to those of higher northern latitudes. The horse-chestnut is a native of the tropics, but it endures uninjured the stern elements of Sweden. *Aucuba japonica*, *Pœonia moutan*, we all remember to have passed from the stove to the green-house, and now they are in our open gardens."

All this is very true, but it does not show that the nature of the plants, or their powers of endurance have changed one degree, or even a shade of one. It is said further on: "Then, again, there is no doubt that all the Coniferæ of Mexico, which flourish there at an elevation of more than 8,000 feet above the sea coast, will survive our winters in the open air. Among them are, *Pinus llaveana*, *Pinus teocote*, *Pinus patula*, *Pinus hartwegii*, *Cupressus thurifera*, *Juniperus flaccida*, *Abies religiosa*, and some others."

Perhaps the learned author will some of

these days condescend to enlighten us rather more upon this subject, and inform us how there could be any doubt. The *Pinus llaveana*, *teocote*, *patula*, and *hartwegii*, are known hardy plants, and were introduced from Mexico as such, and we should like to know how they could be other than hardy from a climate like that experienced at the top of a mountain 8,000 feet high.

The Coniferæ of Mexico require no acclimatising, as it is called. There can be no doubt that they have to endure greater hardships on the mountains of Mexico, than they do in our ordinary winters; but this has nothing to do with the question of acclimatation. We have all through maintained that it is impossible to alter in any plant its powers of endurance. The only way properly to ascertain a plant's powers of endurance, is to gradually change its temperature, until it is placed in the open ground; and to select several positions, even those of different circumstances, as north, south, east and west aspects, with a registering thermometer at each place.

*The conditions most favorable to a plant are those which involve the least change, and that change the most gradual. It will often be found, that when there is no protection, a plant under a south wall, or a south-west, well perish, while one in a northern or north-eastern exposure will survive; the one never being so greatly excited as the other, is consequently never subject to such great changes, and hence its endurance. The plant placed in the coldest aspect, having no sun to act upon its frozen juices, gradually thaws; while that which is subject to the immediate operation of a hot sun, which frequently succeeds a frost, is often very suddenly acted upon.** But there are circumstances under which plants may succeed better than they generally do, and among them there are certain conditions that can be supplied: for instance, gravelly bottom, good drainage, poor compost, shelter from the northeast winds, are all favorable to a plant that is susceptible of injury from cold; not that these circumstances alter the plant, but they change the nature of what it has to bear. The gravelly bottom is always warmer, the good drainage always tends to the same end, the poor soil keeps the plant from growing too rapidly, and the shelter is of the greatest consequence; but if, notwithstanding all these circumstances the winter is severe enough to overcome them, the half hardy plant that would go through some winters will perish. It will bear no more hardship, after all that can be done for it, than it would have borne without so much coaxing, because all that has been done only changed the hardships it had to go through, and not the constitution of the plant itself.

But let us now consider how far, according to Mr. Johnson's notions, the offspring of tropical plants raised from seed may be *rendered* much more hardy than their parents. Now we deny that a seedling can be *rendered* more hardy than the parents; although we do admit that seedlings *may be* more hardy than their parents. Our opinions are founded on this one fact:—Among plants known to be tender, the dahlia, potato, and some other subjects, something has been done in the way of seedlings, and in a batch of many, some will be found affected with the frost more than others. Among broccoli, cauliflowers, and some other subjects, it is known that the seedlings will in some cases differ from the parent—some will endure the winter better, some come earlier, some stand better; in short, it is not at all uncommon to see a visible change in many of the plants. The new varieties of peas, cabbages, cauliflowers, broccoli, turnips, melons, cucumbers, and all kinds of fruit, have been obtained from seed, and the constant variations to be found in seedlings from a known parent, show us distinctly that it is fair to hope, that in a limited degree there may be a progeny somewhat more hardy than the parent.

We were once going through an immense piece of broccoli, after the extreme hard winter so oftencalled Murphy's,when on or about the 11th of January, there was the hardest frost known in England. It was as difficult to find a bit of vegetable alive as if every thing had been burned up. On this occasion, there were, among a wreck of thousands of plants, which were rotten and

* We have italicised this passage as containing the pith of all practical knowledge in the treatment of half hardy plants.—Ed. Hort.

perished and putrid, two or three plants as strong and healthy as if there had been no frost; we remarked at the time they were valuable exceptions to the desolation around, and that their seed would pay more than the whole crop would have done. All that we could get out of the gardener was, that the family must have those three heads, and he could not save them; and so it was, the family, or some part of it, had noticed them, and ordered them to be cut for dinner. The gardener would have lost an excellent sort, or rather three excellent sorts, for one was completely sprouting, one a rather dark, and the other a white head. Here was evidently hardier offspring than the rest of the seedlings appeared to be, and we can hardly doubt that in every description of plant, it is possible to obtain plants hardier than the parent, though not very commonly so without hybridizing, as it is called, that is, impregnating or fertilizing a hardy kind of plant with one of the tender, and so producing hardy plants with the principal characters of the tender one. At all events, there is no denying, that if seed be saved as carefully as possible, and seedlings raised from it, there will be found differences in the seedlings in foliage, in habit, in hardiness and in other properties that render the plants more valuable; while, on the other hand, there will be discovered many much worse than the original.

So long therefore as variation is to be found in seedlings, as compared with the parent plant, so long there must be allowed a possibility for some to be more hardy than their parents; but we maintain, that practically there cannot be an alteration made in the power of a plant to endure heat or cold. The same plant that has been tried down to the lowest degree of cold that it can bear, will, by gradual increase of temperature, be made to bear as much heat as ever it did; and by the same gradual plan of lowering the temperature, it may be brought back again to bear all it ever did bear of cold.

Nobody can dispute the ill effects of sudden transition from heat to cold, and vice versa; but it applies alike to all plants, hardy, half hardy, tender, and tropical. The sturdy oak would be victimised as readily as the delicate orchidaceous plant, by the sudden change of temperature, and its nature would be nevertheless as little changed as if it had remained in its native forest.

We admit, however, that the constitution of a plant may be injured, that is, that a plant may be got into an unhealthy state, and by no means sooner than by sudden change of temperature; that it may, in fact, be so damaged as not to be recovered, but to linger on in ill health a considerable period, and perhaps eventually to die; but this does not make it a tender plant, it only renders it a sickly one. We have seen the constitution of a plant damaged by excessive propagation, and with great difficulty, some of the progeny by cuttings recovered, but we have seen others that never recovered, and their cuttings and layers continued the same sickly, weakly character that distinguished the parent; but still the fact had nothing to do with the powers of the plant to endure cold or heat. A plant, whether tender or hardy, may be healthy, and it is on healthy subjects alone that we can place any reliance in the trial of what a plant can bear.

The question of acclimatizing plants, therefore, is only tenable if we put another construction on the word, and instead of using it as meaning the *making a plant more hardy than it naturally is*, use it in the sense of *proving how hardy a plant naturally is*, for such is all we can do.

The first *Aucuba japonica* that ever reached this country, would have stood out of doors just as well as the last; all that had to be avoided was sudden change, and which no plant will bear. Every day experience shows us, that sudden alteration of temperature is mischievous. If we want to force a rose or an American plant, we dare not take it into a hot stove at once, for they would fail; but first in a cold pit, then in a green house, next in a moderately warmed pit, and lastly in the stove, they will do just as we wish them to do, and according as we hasten them, so do they come earlier; but when they are in flower, if they are brought suddenly into the cold, they would irrecoverably fade, so that we

are equally called upon to reduce the temperature gradually; nevertheless the rose and the American plant will stand just as much cold as ever, so that we reduce their temperature by degrees. So much for acclimatizing.

ENGLISH AND AMERICAN LANDSCAPE GARDENING.

In a number, per last steamer, of the *Chronicle and Agricultural Gazette*, the first English horticultural periodical of the day, edited by Professor Lindley, we find the following article, which we copy, not for the purpose of calling attention to the commendation bestowed on one of our works, but to throw a little light on the nature of the criticism itself:

John Bull looks at brother Jonathan with a strange compound of feelings. He dislikes him as a rival; he loves him, and is proud of him, as being, after all, of his own flesh and blood. But whenever, in science, art, or literature, Jonathan treads rather sharply on the heels of John, the said John bellows out must lustily.

Of all the Arts in the Universe which were likely to be the ground of competition between progenitor and descendant, Landscape Gardening would, in this case, seem to be the last. And yet, *our American brethren, so far from being behind us in skill, enthusiasm or execution, seem to be taking the lead most decidedly.* Whatever books our own Landscape Gardeners have put forth, have been few and far between; until the time of Repton, they have rarely been practical treatises: and the volume which contains the whole of his publications is rather a combination of separate essays, than an elaborate and comprehensive treatise on the whole subject—laying down great principles—setting forth needful details—and abounding in illustrations from his own experience. But the date of his last work, as originally published, is not more recent than July, 1816. Between that time and this, Landscape Gardening has languished so greviously that no publication of any eminence has appeared.

There is now lying before us a thick octavo volume of about 500 pages, entitled "A Treatise on the Theory and Practice of Landscape Gardening, adapted to North America." It is by "A. J. Downing, author of 'Designs for Cottage Residences,' etc."* The volume itself is beautifully got up. It is full of admirably executed illustrations—representing very numerous landscape gardening and architectural effects. It had reached its second edition in 1844, although an expensive work: a consummation which a similar treatise published in England by an English landscape gardener, could scarcely have hoped to reach. It is a singular composition altogether. There is much error in the reading of the past; there is a slavish admiration of the late Mr. Loudon, who, whatever his merits in other respects, was not only a very crotchetty man, but peculiarly so whenever he attempted an approach to Landscape Gardening; and yet as might be expected from a man of any talent, engaged in laying out beauties in scenery so singular, and even sometimes wild, there is a vigor of thought and a homely strength of expression, combined with a correctness of taste, which would put to shame many a professing landscape gardener of the present day.

As to his "Historical Sketches," of the science in this country, the less said the better. It is done clumsily, and abounds in errors as to fact. It is when "his foot is on his native heather," that he shakes off every such encumbrance, and speaks out plainly and well. At present we shall notice nothing more than what we may term his ground plan—the outline of his principles. These are summed up at the close of his chapter "*On the Beauties and Principles of the Art:*"—"In this brief abstract of the nature of imitation in Landscape Gardening, and the kinds of beauty which it is possible to produce by means of the art, we have endeavored to elucidate its

* Wiley and Putnam, New-York and London, 1844.

leading principles clearly to the reader. These grand principles we shall here succinctly recapitulate, premising that a familiarity with them is of the very first importance in the successful practice of this elegant art, viz. :—

"1. The Imitation of the Beauty of Expression derived from a refined perception of the sentiment of Nature.

"2. The Recognition of Art, founded on the immutability of the true, as well as the beautiful.

"3. And the production of Unity, Harmony and Variety, in order to render complete and continuous, our enjoyment of any artistical work."

In admiring these great principles, however, we must not forget that the application of them must necessarily be very different here and in America. *Here* the Landscape Gardener has almost entirely to create. *There*—when a villa or a mansion is erected near the banks of some magnificent river, or on the skirts of some equally noble forest—surrounded by native plants and flowers, which you admire as you tread the rich green sward—the first skill to be shown is not in Creation—but in Removal, in clearing away superfluous objects, and so making the views on all sides marked by Unity, Harmony and Variety. The two processes are obviously opposed to each other—as opposed as are destruction and creation. But it is equally obvious that the task of the English landscape gardener is in the same proportion more arduous than that of the American; while it is manifest he must have to wait during a far longer time for the development and maturity of the plans which his taste has designed. In other respects, however—so far as original taste is concerned, Englishman and American, although starting from different points, ought to arrive at the same goal.

So much for the present. Details will come forth hereafter. And then, most excellent John Bull, you will see that this is no time to fold your arms, and loll in your chair, as if the race had been won, and the prize already yours. You have not gained the victory, nor the prize. Your affectionate brother Jonathan is as active as his own vigorous youth, and the sight of magnificent scenery around can make him. He is day by day forming many a home scene of mingled grace and splendor, while you are content to place yourself entirely in the hands of *professing* landscape gardeners; and lazily permit them to surround your mansions with scenes and views as ugly as their own taste is false.

We confess the praise bestowed on our *Landscape Gardening*, and the rank given it by the author of this article, have startled us as much as it would do to hear that the French nation had suddenly discovered and admitted that the English are a civilized people, and do not wholly live upon *ros-bif au naturel!*

Dr. Lindley, undeniably the most distinguished botanical and horticultural writer in Great-Britain, is no less remarkable for his high toryism, and the "cold shoulder" which he always turns to America. We are not sure, indeed, he will ever forgive "the colonies" for breaking with the mother country, and declaring themselves free and independent; and we are quite confident, from the tone of certain little replies to correspondents, etc., in the *Chronicle*, that often, when Dr. Lindley thinks of us,

"Disdain and scorn
Ride sparkling in his eyes."

We are glad to see, by this article, that little by little we are earning better opinions from our transatlantic brother—and we assure him, if he will only leave the University of London, and his herculean scientific labors for a short time, and come over and pay us a visit, we will show him some results that will disabuse his mind of a score of lingering prejudices. He cannot but be gratified to examine a country where eighty per cent. of the whole population is devoted to agriculture; where the total amount of agricultural produce for the present year will exceed *seven hundred millions of dollars* in value; where the pro-

gress in rural architecture and rural taste, has been more rapid within the last five years than in any country in Europe, (England hardly excepted,) in fifty; and where his own *Theory of Horticulture* is better known and far more widely circulated than in Great Britain. We do not state these facts in the spirit of boasting, but because we know sturdy, honest JOHN BULL will not *respect* JONATHAN till he finds he is *respectable.*

Our friend, the late Mr. LOUDON, was, Dr. LINDLEY tells us, a "crotchetty man." Yes, his crotchets, that found little favor in the eyes of the latter, were these—that he was no church-and-state man; that he believed in the largest liberty of opinion; and that he was an ardent and unflinching advocate of the rights of the laboring classes. In all his works we see most strongly marked his desire to raise the British working man, so long degraded by the sway of caste, to his proper and natural position. To this end, he not only designed and published plans of cottages and grounds calculated to improve the social, physical and moral condition of the working class, but he held up to public censure those in high places, who forced their dependants to live in houses more comfortless than those of their domestic animals; while he commended in his periodicals those who respected the natural rights of man, and understood the moral obligations attached to the possession of large wealth.

Mr. LOUDON's taste was by no means perfect in landscape gardening or architecture. (It would be difficult to say whose is.) We have expressly stated in our *Landscape Gardening* that, "as an artist he is deficient in imagination," but we consider him as being the most *philosophical* writer on the subject that any country has produced. He never suggested an improvement in grounds without giving a good and sufficient reason for it, and he did more to popularise and disseminate general ideas of correct taste, than any other writer whatever. Indeed, his works are so well known and appreciated in America, that this explanation seems almost superfluous.

That our "Historical Sketches" of landscape gardening in Britain, are not satisfactory, in the eyes of Dr. LINDLEY, we regret. Luckily for our reputation, it is the portion of our work which has no claim to originality, and as it was entirely compiled from standard English works, the "errors as to fact" must be sent elsewhere for correction.

Dr. LINDLEY intimates truly, that English works on Landscape Gardening rarely or never reach a second edition. We are glad to be able to say that a *third edition* of our volume will soon be put to press, although the last edition was one of double the usual number. We state this, not as a proof of the merits of the work, which abounded with defects in the first edition, and is not free from them in the second, but as the best possible illustration that there is already a much larger class in the United States, alive to the importance and value of rural beauty and rural improvement than exists at the present time in England.

LARGE PEACHES.—The Ohio Cultivator speaks of a seedling from the Lemon Cling, a very handsome, red, yellow-fleshed peach, the fruit of which measured more than a foot in circumference. One weighed fourteen ounces, and four together weighed two pounds fourteen ounces. This, though not the largest ever raised, is unusually large.

COLLECTIONS IN NATURAL HISTORY.

BY J. JAY SMITH, PHILADELPHIA.

"Who loves a garden," says Cowper, "loves a green-house too," and those who admire *truly* the beauties of a garden, are apt to love the feathered songsters who cheer them in spring and autumn. Under this impression, your readers will probably be interested to learn of a *Collection of Birds*, just acquired by the Academy of Natural Sciences in this city, the history of which is highly interesting.

Dr. Thomas B. Wilson, a native of this city, has lately purchased the celebrated collection of birds called, the "Rivoli Collection," made by the Duke of Rivoli, the son of Marshal Massena, in Paris. He first purchased a part of the Duke's museum, amounting to eleven thousand specimens; a second purchase brought over two thousand five hundred. He has since procured the "Australian Collection," made by a scientific Englishman, who is writing a great work on the ornithology of that strange and interesting country, and to make the series complete, he has just received the collections of Leyden and one from Lyons. Altogether, he has thus assembled *twenty thousand* specimens, without counting a single duplicate, of which two thousand have been discarded.

With extraordinary liberality, Dr. Wilson has deposited the whole in the Academy, and has, in the handsomest manner, given a large sum to increase the size of the room, and to make suitable, nay elegant cases for their reception. Charles Lucien Bonaparte, the ornithologist, pronounces the Academy's collection, the greatest and most complete in the world, and Dr. Gray may well have asserted, in a late lecture in Boston, that Philadelphia is now the Mecca of science, to which pilgrimages must be made by the student of nature.

These birds have cost Dr. Wilson *twenty thousand dollars;* in addition, his donations for building and cases, have amounted to *sixteen thousand* more. But his liberality does not stop here; every vessel from Europe brings to the Academy the best, rarest and most costly works on science, that can be procured; so that the sum of fifty thousand dollars may safely be set down as the aggregate of his donations. Here, you might reasonably suppose the catalogue to stop; but he also maintains two young and enthusiastic naturalists to take charge of these valuable treasures.

We, in Philadelphia, do not boast as much as some of our neighbors, but an attentive observer cannot fail to congratulate our city and the country generally on the spirit and taste which governs the members of the Academy. They previously possessed De Schweinitz's and other celebrated collections of dried plants, and Dr. S. G. Morton's unrivalled musée of comparative anatomy, which includes the greatest number and variety of specimens of the human head of any other in the world, together with other curiosities, books, minerals, etc., etc., of extreme value. I ought to add that the rooms containing all these things, are open to the public twice a week without charge. Yours. J. Jay Smith.

Philadelphia, Oct. 27, 1847.

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[We have lately had an opportunity of examining this magnificent and unrivalled collection of birds, of the beauty, interest, and variety of which, language would fail to convey the least impression to the general reader. We hope none of our readers

who love the study of nature, will fail to examine, whenever they have the opportunity, the extraordinary representation of her various kingdoms, to be found within the walls of the Academy of Sciences in Philadelphia.—Ed.]

NOTES ON CURRANTS, RASPBERRIES, &c.

BY WM. R. PRINCE, FLUSHING, L. I.

In the Gardener's Journal, (English,) an article has recently appeared, suggesting that improvements might be made in the Currant, the Raspberry, and even in the Gooseberry, by seminal reproduction. The editor also quotes from the "Midland Florist," an article written by Mr. Tomlinson. If these two articles referred to, furnish a fair criterion as to what has as yet been done in England, in regard to the Currant, viz. that seeds of the finest varieties have been saved the present season, destined for next spring's sowing, I have to state in behalf of our own country, *that we are in the advance.* I have plants a year old, of the leading varieties of which he speaks, and also of some equal to the largest he enumerates, which he does not possess, and probably knows not of, as they are not enumerated in the latest Catalogue of the London Horticultural Society, nor in any other English publication. One of them is a *white* variety, with larger fruit than any red one that has come under my observation; and another is a *white* variety, second only to it in size, and very remarkable for its mild and pleasant flavor.

About five years ago, I took the pains to obtain a few plants of every variety of Currant and Raspberry in Europe, by whatever name called, and they have been for three years in bearing. Mr. Knight's improvement of the Currant was but trivial, because he selected *an inferior variety to begin with*, and he appears to have been totally ignorant of the existence of the very superior varieties, then much cultivated in some parts of Europe. I have *milder* varieties than his "Sweet Currant," that had existed in Europe for more than fifty years previous to the commencement of his seminal operations.

In our own improvement of the Currant, (and of the Gooseberry also,) I trust that the several native species will receive merited attention. Mr. Tomlinson, in his reference to May's Victoria Currant, speaks of it as having been extolled to him, and "as a fine sort to save seeds from." Such is not the case. When, about four years ago, I read the announcement, that May's Victoria Currant had been exhibited by him, before the London Horticultural Society, the berries measuring half an inch in diameter, I immediately purchased a £1 sterling note, and enclosed it to him, asking him to send its value in plants to a friend in London, who forthwith transmitted them to me. I have since purchased about 150 plants, 18 of which I planted out for myself. All the plants sent to me have been so small, that I have not had a fair crop of fruit until the present season. *I am totally disappointed in regard to it.* The fruit is no larger than the old Red Dutch, with which it is perhaps identical, or a seedling, with no essential variation from that old kind. The fruit which measured a half inch in diameter, must have been enlarged by the same process as is practised with gooseberries; which is by first stimulating the plants by powerful ma-

nures, and then pruning them with great attention, and allowing but a moderate number of berries to remain upon each plant. This practice is very generally adopted in England, by growers of fruit for premiums; but it does not form a fair test of the real merit of the variety. It may be well to say, that the largest varieties I have fruited, are the White and Red Provence, French Large White, Cerise de Tourés, or Cherry Currant, and the Bangup and Naples, the two last being black varieties.

In regard to the Raspberry, we may also say that our pomologists have not been idle. Dr. Brinckle of Philadelphia, the well known originator of a number of highly estimable varieties of the Strawberry, and the only person who has positively hybridised the Scarlet and Hautbois families, has presented to our view the Cushing and several other beautiful and estimable varieties of the Raspberry, some of which are of a color previously unknown to this class of fruits. On my own part, I have also done something. I have above fifty seedlings of the Fastolff which have produced monstrous fruit the present season; a dozen or more seedlings of Knevet's Giant, which from analogy, I presume was the parent of the Fastolff; a large improved seedling variety of the common Red Market Raspberry; and numerous seedlings, partly hybridised, of the White American, Ohio Monthly, Franconia, and Red and White Antwerp varieties. I added to my collection every estimable European variety before commencing operations, deeming it the proper course in this, as in every other American pursuit, to adopt the climax of European attainment as the starting point for American development. I have saved the seeds with my own hands, during the present season, of every estimable variety, for further progress.

As with the Grape, so with the Raspberry, the God of nature planted but one edible species on the eastern hemisphere, whereas numerous species are scattered far and wide, on the American soil, from Quebec to Virginia.

When a schoolboy, studying the French language at Montreal, I well remember how oft in my rambles I found on the roadsides a profusion of delicious raspberries, and of a species yet utterly unknown in this section of our Union, save a few plants I cherish in my grounds, for "auld lang syne." Again, when rambling over the wilds of the Catskill, I found, in a state of native luxuriance, three varieties with which I had been familiar from childhood, in the gardens of my father and grandfather. One of these was the identical "Common Red," now so extensively cultivated for market; the second was the "Black Cap," and the third was the "American White." It is a peculiar characteristic of the Catskill varieties, and of the "Ohio Monthly," (which are all of the same species,*) that they never sucker, but propagate themselves by throwing down to the earth the extreme ends of the long shoots, which strike root, and form each a new plant, after which they detach themselves entirely. There is in Pennsylvania and perhaps farther south, a distinct species, (*Rubus pennsylvanicus*,) producing large fruit about the size of the Franconia, and similar in color, being a very dark red. This invariably produces a second crop in October. [According to Torrey and Gray, *R. pennsylvanicus*, so named, is only the common Red Raspberry.—Ed.] In Virginia also, one or morespecies [varieties?]

* Mr. Prince falls into error, in saying these are all the same species. The "Common Red" Raspberry is *Rubus strigosus*, (*Mx.*) entirely distinct in foliage, fruit, and habit of growth, etc., from the common "Black Cap," *Rubus occidentalis*, (*Linn.*) The "Ohio Monthly," or Ohio Everbearing, is merely a variety of the latter, but one which in strong and damp soils, we think valuable. With us it produces fruit abundantly till the frosts of November stop its growth.—Ed

are found distinct from all others. Blessed then as our country is by the profuse hand of nature, shall Americans confine themselves simply to the improvement of exotic species, and neglect those presented to us on our own soil, and which are of much greater hardihood. I trust not, but anxiously hope to witness the same zeal displayed in regard to one as to the other, that we may, in the result of our labors, be enabled to boast improvements as numerous and wide spread as are the glorious regions of our common country.

W. R. PRINCE.

HOW TO RESTORE THE PRODUCTIVENESS OF OLD APPLE TREES.

BY H. W. ROCKWELL, UTICA, N.Y.

A. J. DOWNING, ESQ.—I do not recollect of having seen any very valuable results recorded in the Horticulturist, concerning the root pruning of the apple. I have, however, tested the experiment, with a little variation from the directions laid down in the article of your correspondent, "How to renovate an outcast," and have had the satisfaction of seeing my most sanguine anticipations more than realized.

The experiment was performed upon three trees standing in my grounds, none of which were less than *thirty years* old. One of these trees, an old fashioned [Newtown] Pippin, and a great favorite, had borne moderately; the other two made out between them, to "get up" about a dozen apples a year, just to let me know, I presume, that they "could do it," but were perfectly indifferent *how* it was done.

I, last summer, undertook the renovation of these trees. For this purpose, I opened between them trenches, say ten feet in length, two feet in depth, and about eight feet equidistant from tree to tree. The roots which were encountered in this operation, were, of course, all cut off, the trenches filled with *well rotted manure*, and closed. I finished by giving each of the trees about a peck of charcoal mixed with the same quantity of ashes, and now for the result. I have this year gathered from the "two outcasts" just mentioned, instead of my annual dividend of a dozen apples, from six to eight bushels apiece of as handsome fruit as you ever saw, with about the same proportion from the third, which has always been a moderate bearer. I believe the experiment has succeeded as perfectly as if each tree had been *completely encircled* by a trench, as directed in the plan for the renovation of the pear tree. It certainly is easier to be put in practice where root pruning is to be done on a large scale.

Yours. H. W. ROCKWELL.

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We commend the foregoing to the possessors of unfruitful old apple orchards. Such are not unfrequently seen, where the barrenness of the tree arises solely from their having exhausted all the elements of fertility in the soil. Forced to emit a set of new roots, and supplied with abundant nourishment, the trees quickly regain their former fruitfulness. The result of Mr. ROCKWELL's experiment proves that for the labor expended, the orchardist is abundantly remunerated.—ED.

NOTES ON VEGETABLE PHYSIOLOGY AND AGRICULTURAL SCHOOLS.

BY D. TOMLINSON, SCHENECTADY.

It was formerly the general practice of farmers to cut off the tops of their Indian corn stalks, so soon as the corn was glazed. It is yet done by the majority of corn planters, although it has been proved by a writer in the *Cultivator*, that the loss of weight in the corn produced by cutting off the tops before the corn becomes fully ripe, is greater than the value of the tops of the stalks. This practice is continued, probably from want of faith in the proposition; and want of faith exists, because vegetable physiology is not generally understood by farmers.

If it were understood and believed, that the leaves performed the part in plants that lungs do in animals, by exposing the crude sap to the atmosphere, parting with oxygen and secreting carbon, and returning the fluid thus improved, back to the whole system of the tree, thereby nourishing and perfecting the seeds, as well as the trunks, then the growers of vegetables would understand the reason why the tops of cornstalks are and must be useful in ripening the grain or seeds. This being the fact, the same reasoning is applicable to other vegetables. Fruit trees ripen their fruit under the action of the same laws. If the leaves which act as lungs, are taken off the trees, they must put out new leaves soon, or both the fruit and tree suffers, and if repeated must perish. I have known persons to take off the leaves from grape vines, to expose the grapes to the sun, in order to ripen them more perfectly, and add to their sweetness. This has also proved to be an error; as the grapes thereby remained unripe, sour and worthless. A neighbor of mine took off *all* the leaves from his grape vines, last year, with a view to ripen and improve the grapes, and the vines appeared naked last spring till late, as if dead, and did not expand their foliage fully till summer. They yielded no fruit this season.

As both the wood and fruit of trees are nourished and matured by the returning sap, after it is digested or elaborated by the leaves or lungs, so it is presumed, that it is through this law, that when a variety of scions are engrafted on one trunk, they produce fruit like the stock from which they were taken. If it were not so, and that the proper nourishment was from the roots only, it would follow that the trunk would produce its own natural fruit on the various scions grafted on it, although they were of a variety of other sorts.

A friend of ours in the country, near this, a few days ago, gave us several apples, which were on the one side yellow and sweet, on the other side green and acid. They were produced by dividing and inserting in the stock, half of a bud from a Tallman Sweeting apple tree, for the sweet, and half of a bud split, from a Rhode Island Greening tree, for the acid. The fruit partakes of both kinds in each apple.* This we found to be the fact in eating them.

* This prodigy, of an apple "half sweet and half sour," is not very uncommon; we have twice found it in various parts of the country. But the explanation of the matter given and repeated above, is, we believe entirely fallacious. In the first place, it would, we think, be impossible to split two buds and unite them so as to secure a union and the growth of both; and in the second place, if they did grow, each side corresponding to each half of the bud, would produce its proper fruit. To prove this, it is only necessary to take from a pear tree a circle of bark, and replace it by another circle of the bark of the quince. An union will take place, and after a few year's growth, if the tree is cut down, and the trunk examined, it will be found that the fibres of wood underneath the circle of quince bark are *quince* and not *pear*. Hence if a bud could be divided, and made to unite with a portion of another bud, each side would be as distinct in its bark, buds, leaves and fruits, as two separate grafts.

We do not see why a fruit half sweet and sour should excite any more surprise than that every day miracle of a flower half red and half white, which may be seen in the common Four-o'clock, and several other plants.—Ed.

The numberless instances, where even a slight knowledge of vegetable physiology may be brought to bear advantageously on agriculture and horticulture, prove that an agricultural college would be most important to all cultivators, by improving them in the useful knowledge of this and other sciences, which, when understood, would be of great importance and profit to them and the whole community. It is much to be hoped that our Legislature will pass a law to establish such a college. Most respectfully, DAVID TOMLINSON.

Schenectady, Oct. 17, 1847.

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Our correspondent's views of the importance of the leaves of plants to their growth and the proper maturation of their fruits and seeds, are correct and forcible.

That an AGRICULTURAL SCHOOL, endowed *on a basis liberal and broad enough to command the best practical and theoretical talent* to be found, would be of incalculable benefit to this great state, so large a part of whose population live by the culture of the soil, no reasonable man, who gives the subject careful consideration, can for a moment doubt. But, unless this high character be stamped upon such an institution, it were better not to attempt it; for that kind of college which we hear some legislators advocating, and which would be filled with third-rate *soi-disant* men of science, and third-rate practical farmers, as teachers, would only disgust clever sons of farmers, with what would be termed a scientific education. An agricultural school, like a bank, should be tested by its working well, theoretically and practically, and therefore, none but sound scientific teachers, who understand and are capable of carrying out what they teach, ought to find a place in such an institution in the present state of our wants. —ED.

TWO TREES WORTH PLANTING.

THERE are two trees, great favorites of ours, natives of this country, and easily obtained in most of the nurseries, which are not half so generally known, admired and planted as they deserve to be. We mean the OVERCUP OAK (*Quercus macrocarpa,*) and the ASH-LEAVED NEGUNDO (*Negundo fraxinifolium.**)

The Overcup Oak, though sometimes seen growing wild in the Atlantic States, and even as far north as Stockbridge, Mass., abounds most plentifully in Tennessee and Kentucky. Its great recommendations are, 1st. Its rapid growth, being, in ornamental plantations, one of the most luxuriant of hard-wooded trees; 2d. The fine size of its foliage, which is two or three times as large as that of most other Oaks—often, indeed, fifteen or sixteen inches long, and of a fine dark green, forming on full grown trees very rich heads of foliage; and 3d, its very large and handsome acorns, curiously tufted or fringed at the edges of the cup.

This oak is also remarkable, when young, for the *corky* appearance of its bark, in which it differs from other oaks, and resembles the Gum tree and the Cork-bark Elm.

As the Overcup Oak grows rapidly while young, and as it is beautiful with its fine long leaves, in every stage of its growth, we trust it will command the attention of all our readers who are planting forest trees remarkable for beauty or rarity. When full grown, it makes a noble tree of sixty feet in height, with a well shaped

* Ash-leaved Maple (*Acer negundo*) of the old botanists.

Fig. 39. *The Overcup Oak.*

spreading head. Our cut, fig. 39, represents the form of the leaf about half the natural size, and that of the acorn, of full size.

The Ash-leaved Negundo is, perhaps, the more familiar to our readers, of the two under consideration, still it is by no means a common tree in our pleasure grounds, though we may safely say, that it deserves a place in every plantation of even a dozen of trees.

Its peculiar merits may be presented to the novice as follows: it is perfectly hardy, since, though mainly a southern tree, it grows wild even as far north as Canada; it is of exceedingly rapid growth, takes root almost at once after being transplanted, makes a thick head of foliage very speedily; and attains a height of forty or fifty feet in good soil, in the short space of twelve to eighteen years; its foliage is of a peculiar *lively, light green*, which gives it a striking and marked appearance among other trees; while its long racemes of pale green seeds, which hang all summer on the tree, and the peculiar pea-green bark of the young wood, are all features of novelty and interest to the arboriculturist.

When we add to this, that it is one of the first trees to put on its tender green drapery in the spring, that it will grow in any soil, and, that if planted out singly, there are few trees that show such a fine broad fluttering head of foliage, with a comparatively small trunk, we think it must be admitted that the Negundo well deserves to be the familiar of those casting about for species to adorn their ornamental grounds.

The leaves of the Negundo are in *threes*, like those of the Ash, which gives it the specific name it bears. Unlike many of the rapid growing trees—the Abele, Ailanthus, etc.,—the Negundo rarely or never produces suckers to disfigure the lawn or walks, where it is planted.

ON THE USE OF WATER IN TRANSPLANTING TREES.

BY GEORGE BARTLETT, SMITHFIELD, R. I.

This is a practice which is condemned by many gardening writers; but is their objection founded on careful experiment; or has the subject, like so many others, been prejudged? Experience and reflection have given me a high opinion of the use of water in transplanting trees, and I will give you a brief description of my method, which you may take for what it is worth.

After preparing the border for the tree, I take out sufficient earth to give the roots room to lie in their natural position. This earth is finely pulverised. One man now holds the tree in a perpendicular position, with its roots in the hole, while another pours two pailsfull of water into the hole, and a third slowly sifts the fine soil into the water, being at the same time careful to fill the outsides of the hole so as to keep the water about the tree.

This process leaves the roots exactly in the position which they occupied before removal, and it makes the earth settle about them in the most perfect manner. If the soil is fine, and if it is sifted into the water slowly, it is deposited on every side, and every part of the roots, filling all of the holes and interstices, coming in contact with the smallest fibre, and covering the surface with perfect uniformity, like the deposits of gold in galvanic gilding.

Trees set in this manner, maintain their

upright position much better than trees set by the ordinary method. If you take hold of a tree immediately after it is set, in the way I have described, you can pull it over very easily, but after it has stood a few hours, it feels as if it had grown in its new position.

Finally, I am confident, from practice, that the trees are more certain to live and grow vigorously when water is used in this way, while they are being planted. After losing a great number of trees, I adopted this plan of transplanting, and have since set about five hundred, out of which I have lost about a dozen, and I think most of these were dead when they were removed.

GEORGE BARTLETT.

Smithfield, R. I., Oct. 7, 1847.

RURAL ARCHITECTURE—SUBURBAN COTTAGES.

WHILE there is a very great improvement visible in the better class of country houses, we observe that the dwellings of many of our villages—houses of moderate or small size, and of a suburban character—that is to say, with a little yard or area of ground about them—retain very much the old stereotyped form.

In a tour, we made recently through some of the most thriving and prosperous parts of New England, we were much struck by the almost exclusive employment of the rectangular wooden cottage, smaller or larger, represented in our frontispiece, fig 37. Passing over the Western railroad, to Boston, village after village is composed almost wholly of this kind of cottage, so that by the external physiognomy of the dwellings themselves, it is difficult for a stranger to detect characteristic features by which to fix any one of the smaller places in his memory. It would be easy to criticise the style of this cottage externally—for though the effect produced is meagre, yet the employment of cornices and pilasters sufficiently indicates that there is an attempt to produce something agreeable to the eye. Instead of pointing out defects one by one, we prefer to offer a very rough sketch of a mode of varying the exterior of a suburban or village house of this kind, without altering its shape or accommodation—both of which may, no doubt, also be greatly improved. (Especially do we object to the too great number of windows in a house of this moderate dimension.)

In fig. 38, we have shown how, at precisely the same expense, this kind of dwelling may be erected so as to be in more correct taste architecturally, and afford at the same time more comfort to its inmates.

It appears to us, that in designing a building, a great deal of the success attained will depend on a correspondence between the style chosen and the material employed. That is to say, for stone or brick, a heavy style—and for wood, a light style, should be chosen.

Now the cornice and pediment, with the angular *antæ* or imbedded pilaster, employed in what we might call the New-England cottage, properly express *stone*, as they are forms which originated in the use of that material. But the projecting roof, supported on light brackets, naturally grows out of the employment of wood, a lighter and more easily wrought material.

This projecting roof gives as much character and expression to a rectangular wooden cottage, as can possibly be given in any consistent and simple way. Besides, by shading, during a part of the day, the upper

story, it renders the rooms of that story more agreeable in the summer season, and protects it somewhat from the violence of storms in inclement weather.

We have added a piazza or veranda to this house, of the simplest and least expensive form, both as giving importance to, and sheltering the front door, and as adding greatly to the beauty and significance of the house as a dwelling. A house in which the front door is bare, is not always easily distinguished from an office or any place of business. The piazza at once designates it as a dwelling house.

The *vertical boarding*,* represented in fig. 38, we prefer greatly to the *siding*, which is in almost universal use in New-England. It has an expression of more firmness and durability than the thin siding, and really is much more lasting, warm and effective, as a protection against the weather. This slender "clapboarding" gives a wooden building a character, perhaps the farthest possible from that of the permanence and *substantiality* most befitting a dwelling house.

The taste that dictates white paint, with bright green blinds, still holds supreme sway over the exterior of the New-England cottage. How much more agreeable to the eye would all these new villages be, if they were *toned down*, a few shades only, by the admixture of a very little gray, drab, or fawn colour, when these dwellings are being painted. We would not destroy their bright and cheerful appearance—but we would in this way banish the glare and rawness that is, in some of the villages of most recent and rapid growth, really harsh to one's eyes.

As we remarked, that among the *best* houses, even in those villages, *neutral tints* begin to be employed, we hail it as the harbinger of a more enlightened taste in this respect, that will soon pervade the public generally.

THE RULES OF AMERICAN POMOLOGY.

In a late number, we called the attention of all persons interested in the production, cultivation, and propagation of good fruit, to the imperative necessity of some reform in the matter of naming, describing and introducing new varieties to public attention.

We endeavored to point out the perplexity and confusion which had already arisen, and which in the future was likely to be multiplied indefinitely, from the manner in which fruits of little or no merit are brought forward, named and disseminated, to the manifest injury of the public, and the complete subversion of every thing like scientific precision or correctness in Pomology itself.

We announce, therefore, with no little satisfaction, that three of our leading horticultural societies—those of Massachusetts, Pennsylvania and Cincinnati—have, since our last number, unanimously adopted a series of *Rules for American Pomology*.

These rules, framed very nearly in accordance with the hints thrown out in the article on *Pomological Reform*, in our October number, are calculated to stamp a character of scientific precision and accuracy on the nomenclature and description of fruits, which will make Pomology rank, as

* Explained in our *Cottage Residences*, and the first volume of the *Horticulturist*.

it should, among other branches of Natural History, and secure the cultivator and propagator of fruits, against hundreds of indifferent kinds continually palmed upon the public, as of the first quality, by persons whose knowledge of the subject is frequently not sufficient to render them competent judges of the real merits of a new variety.

This is the first movement made on either side of the Atlantic towards fixed laws in nomenclature. Every one conversant with the subject, knows what a rank wilderness fruit catalogues had become before the London Horticultural Society undertook, some years ago, the herculean labor of collecting and proving all varieties then known. Now that so much has been done in reducing thousands of synonyms to a few *standard names*, horticultural progress demands something more. It demands that there shall be some qualification fixed, without possessing which no new fruit shall be deemed worthy of a name; that before it can be considered named, it shall be accurately described and published; and that, to guard as far as possible against errors in judgment, fruits shall be described and named only by persons rendered competent by experience and knowledge of the subject.

We learn from the Fruit Committee of the Massachusetts Society, who have been especially active in bringing about this reform, that a number of the most important societies besides, in various parts of the country, have also taken the matter in hand, and are about adopting these rules. We trust, for the sake of uniformity, and in order to give the measure the broad basis of utility which it deserves, that every Horticultural Society in the Union will immediately adopt this new code. By doing this, and by selecting for its fruit committee only skilful pomologists, they will be able to carry them completely into execution, and thus give at once high character to this branch of horticulture, which the great advantages of the United States, both as a fruit growing and fruit originating country, so earnestly demands.

The following are the

RULES OF AMERICAN POMOLOGY.*

I. No new seedling fruit shall be entitled to a name, or to pomological recommendation, which is not at least equal if not superior to any similar varieties of the first rank already known; or which, if only of second rate flavor, is so decidedly superior in vigor, hardiness, or productiveness, to varieties of the same character already known, as to render it well worthy of cultivation.

II. The originator, first grower, or he who first makes known a new native variety of merit, shall be entitled to suggest a name for such variety, which name, if a suitable one, (i. e. coming within the rules of nomenclature,) shall be adopted by the writer describing the fruit for the first time. But if the name proposed is inappropriate, or does not come within the rules, then the describer shall be at liberty to give a name.

III. No new native fruit shall be considered, as named until the same has been accurately described, in pomological terms, by some competent person conversant with existing varieties, some pomologist of reputation, or the standing fruit committee of some established horticultural society.

IV. The description shall embrace the following particulars: 1st. The form and exterior colour, the texture and colour of the flesh, and the flavor of the fruit, with the addition in stone fruits, of the size of

* We reprint the Rules as passed in Boston and Cincinnati. There is a slight variation in one or two instances in the the phraseology, as passed at Philadelphia, entirely unimportant.—Ed.

the stone, adherence or non-adherence of the flesh, form of the suture, and the hollow at the stem; and in kernel fruits, of the size of the core and seeds, the length, position and insertion of the stalk, and form of the eye; in peaches, the form of the leaf glands and size of blossoms; in grapes, the form of the bunches; and in strawberries, the character of the blossoms, whether staminate or pistillate: and also where there is any marked character in the foliage, growth of the young wood, or bearing tree, the same shall be given.

V. The name of the new variety shall not be considered as established, until the description shall have been published in at least one Horticultural or one Agricultural Journal, having the largest circulation in the country, or some Pomological work of large circulation and acknowledged standard character.

VI. In giving names to newly originated varieties, all harsh, vulgar, or inelegant names shall be avoided, such as "Sheepnose," "Hogpen," etc.

VII. No new names shall be given, which consist of more than two words, excepting only when the originator's name is added. [Thus all unnecessarily long titles, such as "New Large Black Bigarreau," "Beurré Gris d'Hiver Nouveau," will be avoided.]

VIII. Characteristic names, or those in some way descriptive of the qualities, origin, or habit of fruit or tree, shall be preferred. They may be either characteristic of intrinsic properties, as "Golden Sweeting," Downer's Late," etc; or of local origin, as "Newtown Pippin," "Hudson Gage;" of the season of ripening, as "Early Scarlet," "Frost Gage;" of the form and colour, as "Golden Drop," "Blue Pearmain;" or which commemorate a particular era, place, or person, as "Tippecanoe," "La Grange," "Baldwin," or any other titles which may be significantly applied.

IX. All superfluous terms shall be avoided: thus instead of "Thompson's Seedling Beurre," it is better to say "Thompson's Beurre," or simply "Thompson Pear."

X. Before giving a name to a new fruit, its qualities should be decided by at least two seasons' experience.

XI. When two persons have named or described a new native fruit, then the name and description first published, if according to the rules herein indicated, shall have the priority.

XII. No person introducing new fruits from abroad, shall be allowed to rechristen the same, or give them his own name; but the same should be submitted to some competent pomologist to ascertain the true name.

XIII. In deciding the names of fruits already known and described, the latest edition of the "*Catalogue of the London Horticultural Society*" shall be considered the standard European authority; and the latest edition of Downing's "*Fruits and Fruit Trees of America*," the standard American authority.

TRANSPLANTING TREES.—Some sensible advice is given in "Maunde's Botanic Garden and Fruitist," for September, respecting the preparation of fruit and other trees for transplanting. It is there recommended that, at the end of August, a trench should be cut halfway round the tree, cutting off, of course, the extremities of the roots. At the end of September, the trench to be continued all round the tree, and the whole left open. This process, says the author, will produce an early cessation of growth, and consequently a more perfect maturation of the wood, in tender trees, together with plenty of fresh fibres, by which the tree, when transplanted in November, will be speedily established. Here the performance of the operation, by degrees, prevents the shock generally given by transplanting, at the same time as additional active fibrous roots are produced to meet the circumstances. In the removal of trees or shrubs, particularly if rather large, this is doubtless a very judicious mode of proceeding.—*Gardener's Chronicle.*

CULTURE OF THE SEA-KALE.

BY D., LONDON.

THERE is no vegetable which we are more desirous of seeing in general cultivation, and which is less common in this country than the *Sea-Kale*. The following sensible practical directions for growing it, from the Gardener's Chronicle of Oct. 16, are therefore transferred at once to our columns—ED. HORT.

The time is now not far distant when gardeners will begin to turn their attention to their Sea-kale beds, with a view to winter-forcing; many will even be preparing to have a cutting ready for Christmas. If a gentleman give orders to this effect, they must be obeyed; but it appears almost an improvident extravagance to consume the vegetable so early in the season, while there is such an abundance and variety of others still remaining in the garden; one in particular, (celery, if stewed,) quite supplying its place upon the table. The time when Sea-kale comes in most acceptably is during March and the beginning of April, when we are tired of winter greens, and have forgotten the taste of Cauliflowers. By growing it on the following plan, it may then be had at less expense and trouble, and of far finer quality, than that produced by any method of forcing; and no one who gives it a fair trial, will afterwards relinquish it for main crops, although he may still choose to force a certain quantity for earlier supplies.

The Seakale bed is to be planted, in March in straight rows, five feet asunder; the plants in each row to be eighteen inches apart. It is, of course, understood that the ground be thoroughly trenched and manured as usual. Something, but not much, is gained by obtaining year old plants from the nursery, instead of sowing the seed in the rows, there to remain. By the first method, you have a larger cutting the ensuing spring; but you may cut from your seedling plants, which will have suffered no check by removal, and will grow with corresponding vigor.

Some time in December, not too soon, when the footstalks of the leaves have fairly separated themselves from the crown of the plants, heap over each about a quarter of a peck of sea sand or wood ashes; if not to be had any light unmanured soil will do. Then earth up the plants from a trench dug along the space between the rows, exactly as if you were earthing up celery, only that no leaves appear above the top of the mound. The earth should be heaped up till it is about two feet above the crowns of the plants, and then flatted down with the back of the spade, and the whole made very smooth and neat. The long trench between the rows of Sea-kale will act as a drain during the dead time of winter. In the spring, when the shoots begin to push, large cracks will be seen in the bank of mould, and a trial may be made with a trowel, as soon as they are supposed to be sufficiently advanced for cutting.

The Seakale thus obtained is larger, more succulent, and more delicately flavored than that blanched under pots. In one case the growing shoot is constantly in contact with the damp mould, and absorbs moisture instead of parting with it. In the other the kale is subject to all the influences of air, though excluded from those of light, from which, however, it is only protected by a porous, imperfectly closed vessel. All the expense of pots and manure for forcing is saved; and the only objection to the adoption of this plan in all cases, is, that the crop comes in too much at once. But by having rows of Kale in different exposures, a difference of at least ten days may be made; and a few plants at the foot of a south wall, earthed up from the border, and merely so covered with mould that it slopes against the wall, will afford a very early gathering.

No second cutting should be attempted; not so much for fear of weakening the plants, as because the weak shoots thus obtained are comparatively worthless. The earth should be levelled into the trenches, exposing the crowns of the plant, and by

introducing some rank manure, there will be plenty of time for a crop of Cauliflowers (in single line) before the increasing leaves of the Seakale require their removal.

A caution should be given to avoid a mode of culture highly approved by many who grow or sell, but do not themselves eat Sea-kale. Instead of protecting and blanching the shoots by a covering of sweet earth, they overwhelm their beds with barrowfuls of leaves collected in autumn (oak leaves are most in vogue,) and just shovel them on one side when the crop is fit for the knife. This plan has not a single advantage over the earthing system, except indulging the laziness of the cultivator; for any decrepid old woman could sprinkle a few apronfuls of leaves over her garden, but the other requires an able-bodied man to do it properly. The plants are not a day forwarder,unless the leaves heat very much; and then the characteristic of the method is fully evidenced. If the oak leaves were gathered perfectly dry, and remained so during the whole winter, if no grass or weeds were ever intermingled with them, all might be well. But the leaves are damp, there is some green rubbish among them, and consequently a slight fermentation takes place, slight putrefaction follows, and the produce grown beneath, which delights the eye like a beautiful branch carved in ivory, disgusts the taste by a flavor as nauseous as it is undoubtedly unwholesome. I have seen Sea-kale of this kind produced at table that was quite uneatable. No wonder we now and then meet with people who have tried it only once, and do not like it.

This valuable esculent, so easy of cultivation, requiring no peculiar advantages of soil, climate or situation, well deserves to be more extensively propagated. Those who form their judgment from the estimation in which it is held in and about London, are little aware how far it is from being general in the remoter districts of Great Britain. It is admirably adapted by its hardiness to such countries as Canada, Norway and Sweden, Northern Russia, etc., where, if earthed up before the frost came, it would lie dormant under the thick snow, and be ready on the return of spring to put forth its delicious shoots. It is also fitted for those northern insular situations where the temperature never rises above a moderate degree, and where the rains of summer and the constant damps of winter would rot our more tender vegetables.

To Cook Sea-kale.—After being well washed, tie it in small bundles for the convenience of taking up, and drop it into a saucepan of boiling water, in which a little salt, according to taste, has been dissolved. Keep it boiling. In about twenty-five minutes it will be done enough, which may be known by trying it with a fork. Sir Humphrey Davy tells us that the reason why vegetables and fish should be plunged in boiling salt and water is, that this solution boils at a higher temperature than plain water, and that the sudden scalding fixes the albumen, mucilage, and other nutritive parts of the viand, instead of their being macerated and sodden, and so partly lost in lukewarm water. The most economical mode of serving Sea-kale is to lay it in a vegetable dish with a strainer at the bottom, and to send up in a small tureen any sauce that may be desired at the same time. The usual way is to lay it on sippets of toasted bread, and pour over it some white sauce or melted butter made with milk instead of water. But if the toast is not intended to be eaten, but only to serve as a draining cushion to the vegetable, and then cast out to pigs, or, in a town, probably to the kennel or dust-hole, such a wasteful proceeding is, to say the least, culpable, while so many of our fellow-creatures are perishing for want of a like morsel.

London, 1847. D.

PROF. LEIBIG AT HOME.—If "republics are ungrateful," some of the European governments are not. The following, which we quote from one of Mr. HORSFORD'S foreign letters to the *Cultivator*, shows that the distinguished chemist—now BARON LIEBIG—is appreciated at home.

"The little farm, called *Leibig Heights*, commands a fine view of Giessen and its surrounding points. Near this little farm the forest director is now laying out a net-work of walks through a grove of several hundred acres of pines. The expenditures are made by the city—a tribute of respect to the genius whose farm has made this little town known throughout the world. There can be no objection to my mentioning here, that the government of Hessia pays all the expenses of postage, and all the cost of transport of matters connected with chemistry that would otherwise fall upon Prof. LEIBIG.

REVIEW.

TRANSACTIONS OF THE MASSACHUSETTS HORTICULTURAL SOCIETY. *Volume I., Part 1, large octavo.* [34 pages and 28 pages of Proceedings.] Boston. Published for the Society, by W. D. Ticknor & Co.

WE announced early last spring, the prospectus of this work, and are happy to find the first part now before us.

The Committee of Publication apologises for the delay, in issuing the work so long after the time fixed for its appearance. "This delay has arisen from an anxious desire to have *plates* in a style of excellence much superior to that of those which now accompany it. After infinite trouble and disappointment, the Committee feel satisfied that the process of *chromolithing*, in its present state, is not adapted for a work of the character which it is determined to stamp on the Transactions of the Massachusetts Horticultural Society, or to give even a faint idea of the beautiful drawings made by their artist, Mr. W. SHARP. While, therefore, the Committee regrets extremely that it is obliged to issue the present number with chromolithed plates, it has resolved not only that the plates of the future numbers shall appear in a very different style, but that, if possible, those of this first number shall be reproduced in a uniform manner."

These are fine plates, richly coloured, and more carefully executed than those in Mr. HOVEY's serial, though, as the Committee so honestly and frankly state, not with that fidelity to nature, and delicacy of tint, which characterise the best English and French coloured plates, done by hand. This defect, however, we are glad to see, will be remedied hereafter.

The plates consist of the two almost *perfect* seedling Camellias raised by the President of the Society, the *Van Mons Leon le Clerc* pear, and the *William's Favorite* and *Baldwin* apples.

The letter press comprises excellent descriptions of these flowers and fruits, a preface by the Corresponding Secretary, an article on the *Character, History and Culture of the Pear*, by GEN. DEARBORN, one on the *Superiority of Native Varieties of Fruits*, by A. J. DOWNING, and twenty-eight pages of the proceedings of the Society.

The letter press is most admirably executed on fine heavy paper, with unimpeachable type and margins; and we congratulate the Society, certainly the most energetic and vigorous in its management in the country, on having fairly commenced so promising a series of Transactions, which cannot but increase very largely its sphere of usefulness.

From Mr. TESCHEMACHER's prefatory remarks, we quote the following paragraphs:

"Independent of the pleasure enjoyed by the sight of them, it will not be difficult to show, that, like Fruit and Vegetables, Flowers may be considered as articles of considerable trade, and are, therefore, of importance in a commercial point of view. Civilization bids us mingle the ornamental with the useful; and the pleasures of the eye, though not so indispensable, are of a much more refined nature than those of the mouth. There is no reason why the overflowings of wealth may not pour forth a grateful and refreshing stream into the lap of floricultural industry, as well as into that of the ornamental branches of the industry of the loom, or into that of the decorative arts of sculpture and painting; none why the drawing rooms of the wealthy should not be rendered attractive by

elegant flowers, as well as by rich flowing drapery, or by the choicest productions of the chisel or the pencil. And as the taste for horticulture advances, few will be found without the desire to see their habitations environed with the ornaments of the forest; with some of the vast multitude of elegant shrubs and climbers, or with perennial and annual flowers, a gay assemblage of which so highly enhances and increases the pleasures of the spring, summer, and autumn—

'What were life without a Rose?'

"This feeling will be well understood by those already interested in the culture of flowers; others may rest assured, that examples are exceedingly rare, of men once engaged in Floriculture ever giving it up but with their latest breath.

"A pretty strong proof, however, of the commercial value of these floricultural pursuits is afforded in the instance of the two exquisite seedling Camellias, the figures of which adorn the pages of this first volume of the Society's Transactions. They were obtained in the conservatories of the President, M. P. Wilder, Esq., by the persevering application of the scientific principles of hybridization laid down by Herbert. He sold his stock of these two seedlings to J. L. L. F. Warren, for one thousand dollars, and Mr. Warren has since nearly tripled this original price for them in Europe. Nor need this remain a solitary instance, for there is, perhaps, no climate in the world so admirably adapted to produce perfection in seed as this, consequently nothing is wanting but industry, care and ingenuity in the selection and cultivation of flowers to enable us to produce the finest displays of what are termed florist's flowers. To the President for these Camellias, and to Mr. Feast of Baltimore, for Roses, have been decreed the highest rewards of the Society. These will, no doubt, prove strong incentives to this pursuit.

"Although the description and delineation of our native fruits and flowers will be the most prominent features of the Transactions, it is hoped that the Society will soon be enabled to offer such premiums for papers, to be inserted in their volumes, as will ensure communications on the best methods of cultivating various vegetables. There are many delicious esculents, which are by no means common, and some yet to be introduced. The fine curled endive delicately blanched, and the Scotch kail, do not yet decorate our autumnal markets. Experiments of the writer have shown that they can be cultivated here in perfection, with the greatest ease; the same may be said of the beautiful large Coss lettuce. Sea-kale is almost unknown, yet it is raised for sale in large quantities in other countries, where it is considered delicious and very wholesome, and when the taste is once acquired, it will, no doubt, become a favorite vegetable. The "Couve tronchuda,"* a very large cabbage, the whole of which, but particularly the stalk of the leaf, is of a much finer flavor than asparagus, is nearly unknown. These enumerations might be extended to some length, but it is not necessary in a preface."

Gen. Dearborn's article on the Character and History of the Pear, is, like every thing from his pen, ingenious and learned. He goes back to the earliest mention of this fruit by Syrian and Greek writers, and pursues its history down to the present time.

We would very gladly reprint this article entire, but its length (nearly 12 pages) will not permit us to do so. The following paragraph will show the rank which he gives the Pear, in which we believe nine-

* This is the *Portugal Cabbage* described in the Horticulturist for Jan., 1847.—Ed.

tenths of the Massachusetts Society will join him:

"Among all the fruits which are produced upon the earth, the highest position has been given to the *Mangostan*, which is indigenous to Java, and other islands in the Indian Archipelago; the second has been assigned to the *Pine-Apple*, the third to the *Orange*, the fourth to the *Peach*, the fifth to the *Grape*, and the sixth to the *Pear;* but as all these, except the three last, are natives of, and can only be reared within the tropics, and as the grape can be raised in the open air in a very small portion, if in any, of the United States, the Pear takes the second station. And if the long period of nearly ten months, during which the numerous most admired varieties are most successively matured for our tables, is taken into consideration, with the diversity of graceful forms, beauty of color, agreeable aroma and delicious flavor of many of them, which rival, if they do not surpass, the peach in those qualities, it may, with propriety, be placed at the head of the list of fruits, in all the states where the orange cannot be cultivated."

We think we cannot better demonstrate the energy and wisdom with which the Massachusetts Society pursues its laudable objects, than by recapitulating from the proceedings of January, 1847, the following handsome list of prizes offered, to elicit native horticultural productions of the highest merit—than which there is nothing within the scope of such an institution calculated to be of such universal advantage to the country at large.

PROSPECTIVE PREMIUMS

Offered by the Massachusetts Horticultural Society, for objects to be originated subsequent to A. D. 1846, which shall, after a trial of five years, be deemed equal or superior in quality and other characteristics, to any now extant:

For the best seedling		Pear, the Society's Gold Medal,	value $60
"	"	Apple, the Society's Gold Medal,	60
"	"	Hardy Grape, the Soc.'s Gold Medal,	60
"	"	Plum, the Appleton Gold Medal,	40
"	"	Cherry, the Lowell Gold Medal,	40
"	"	Strawberry, the Lyman Plate,	50
"	"	Raspberry, the Lyman Plate,	40
"	"	Hardy Rose, the Society's Gold Medal,	60
"	"	Camellia, the Society's Gold Medal,	60
"	"	Azalea indica, the Lowell Gold Medal,	40
"	"	Tree Pæonia, the Appleton Gold Medal,	40
"	"	Herbaceous Pæonia, Lowell Gold do.	40
"	"	Potato, the Society's Gold Medal,	60

Who cannot see in the future, behind this list of prizes, a long train of fine new fruits and flowers, brought into existence by the spirit engendered by this love of horticulture, and this emulation among its devotees? Productions, that once made known by such a Society, after the *five years' trial*, will be propagated endlessly until they enrich every garden in the land. With such a view of the benefits, stated in their simplest form, and saying nothing of the *morale* of this refined culture of the soil, it is impossible not to find great cause of gratulation in the prosperous existence and career of such institutions as the Massachusetts Horticultural Society.

PELARGONIUM LUCIA ROSEA.—This variety is, in its habit and appearance, much like one of the class called "scarlet" pelargoniums. It is a very compact growing plant, with short jointed stems, and good sized leaves, of a soft velvety character. The flower stems are strong, and grow erect, so that the trusses of bloom are brought well above the foliage; the colour of the flowers is a most delicate soft pink, or peach blossom, with a lovely white eye—altogether a distinct colour among pelargoniums. It is a gem for the flower garden, being not only perfectly distinct, but also superlatively beautiful. Sometimes, when kept in pots, and not very freely grown, we have observed it to produce but small trusses of bloom, but this improves when it is growing freely in the open garden. Probably, however, it may in time be improved on; in the mean time, it may chiefly be valued for its novel colour.—*London Hort. Mag.*

FOREIGN NOTICES.

HYACINTHS IN POTS AND GLASSES.—The cultivation of the *Hyacinth* has been so fully explained in previous numbers, that we find nothing to add to the advice which has been given, except one thing, and that is never to use cold water. When the bulbs are first placed in the neighborhood of the water, let it be lukewarm; whenever fresh water is added, whenever it is changed, let it still be lukewarm.

Those who have not studied the effect of this kind of management, will hardly believe how great the difference is between the same sort of hyacinth drenched from time to time with ice-cold water, fresh from the pump or cistern, and that which is nursed with tepid water. The effect is rendered still more beneficial, if four drops of a saturated solution of sulphate of ammonia are added to every pint of water. This is equally the case, whether the bulbs are in glasses of water or pots of earth. Under ordinary management, the roots are chilled every time that water is applied. The Scythians are said to have thrown their children into their rivers, even although frozen, as soon as they were born; and this practice is applied by ninety-nine people in a hundred to their hyacinths. They may depend upon it, that whatever may have been the case with Scythian children, oriental hyacinths cannot bear it. Each application of cold water to their roots gives them a check, and each check tends to diminish their capacity of flowering well.

It is doubtless true, that hyacinths in the open border flower very well without warm water; but then we are to remember that the roots of the bulbs formed in the ground are hardy, and have never been accustomed to warmth; but in a sitting room the roots are born in warmth, nursed tenderly, and quite in a different condition from those which are formed out of doors. The rot in hyacinth bulbs is not unfrequently caused by the neglect of this principle; already in a languishing state, from some original debility, such bulbs require more warmth than usual, and receive less. The tender tissue, chilled by the icy fluid that bathes it, dies and putrifies. It assumes the condition of the potato murrain. Had warmth, the great stimulant of all vitality, been applied, the tissue, tender as it was, would have been excited into action, and soon would have revived under its genial influence.

The best proof of this is the fact that a hyacinth bulb, in a state of rapid putrefaction, while kept in contact with the cold water of a hyacinth glass in a dwelling house, entirely renewed its vitality when removed to a warm situation. The annexed cut [omitted] represents a case of this sort:—In this instance the decay had eaten completely through the base of the scales into the very heart of the hyacinth, which was literally putrid. The foul slimy matter was wiped off, and the bulb was placed, its base upwards, on a layer of warm sand, covering the bottom of an earthen pan. The sand was moistened with water of the temperature of eighty degrees, or thereabouts; a bell-glass was placed over the bulb, with its edges pressed into the sand; and the apparatus was placed on a shelf near a north window, about four feet above an Arnott stove in constant action. From time to time warm water was given by pouring it upon the sand between the edge of the earthen pan and the side of the bell-glass. Decay was immediately arrested; for some time the bulb remained dormant; but by degrees healthy granulations made their appearance, displacing the decayed matter; and in a few weeks a fine crop of young bulbs sprouted forth on the surface of the scales, and on the edges of the healed up sores.

This result, which was extremely curious, was entirely owing to the stimulus exercised by warmth upon the flagging vitality of the bulb. Had not the warmth been applied, the whole of the plant would soon have passed into a state of irremediable decomposition. Nothing could have been more interesting than to watch, day by day, the organic forces of the dying plant exercising their plastic power in the development of tiny scales out of the fleshy tissue of the hyacinth; to see those scales arrange themselves in the form of miniature bulbs, one sprouting out of the bosom of the other, but still nestling close within it; and at last to behold a new brood of tiny hyacinths crowding the space, which so lately was the seat of corruption and death. It was a verification of the fable of the dragon's teeth.

Another thing that warmth will do, is to compel the unwilling hyacinth to form roots. How often does it happen that the bulb, when placed over water, pushes forth leaves, without roots. If this is allowed to go on, the plant becomes top-heavy, and tumbles out of the glass; or if that is prevented, still it flowers badly. Whenever this is remarked, additional warmth should be applied. A convenient way of proceeding is this. When a hyacinth bulb shows no sign of putting forth roots at the same time that its bud begins to swell, fill the glass with milk-warm water, to within an inch of the bulb; wrap up the whole in warm flannel, and station the glass thus prepared in a *warm* closet. This operation will not need repetition, for in general roots will come out in three or four days afterwards. As soon as the roots are a quarter of an inch long, add as much warm water as will just touch the tips of the roots, and again leave the plant still wrapped in flannel, till the roots are half an inch long. When that is the case, danger is over; the flannel may be removed, the bulb exposed to light, and no other care is requisite, than that of still guarding against cold water. *Lindley.*

EIGHT CONSERVATORY CLIMBERS.—1. *Combretum purpureum*, or, as it is now called, *Poivrea coccinea*, a half shrubby plant, with oval leaves, and branching spikes of scarlet flowers, with conspicuous stamens; it will flower all the summer by stopping the strongest shoots occasionally. 2. *Echites suberecta*, a beautiful yellow flowering plant, which has generally been grown in the stove, but will answer well for the conservatory by spur-pruning, like the vine; it is a very strong grower.

3. *Ipomœa horsfalliæ*, a splendid plant, with deeply lobed leaves, and bunches of crimson blossoms; should have a warm close position. 4. *Mandevilla suaveolens*, a very free grower, with hairy oval leaves, and bunches of white deliciously fragrant flowers. 5. *Passiflora racemosa*, a splendid crimson passion flower, which will flower freely nearly the whole year; does best grafted upon one of the hardier sorts. 6. *Plumbago capensis*, an easily grown plant, with long slender stems, bluntish leaves, and good sized bunches of pale blue flowers; may be had in bloom from April to November, by cutting back some of the strongest shoots in summer. 7. *Stephanotis floribunda*, a beautiful evergreen plant, with dark green, shining, blunt oval leaves, and bunches of white deliciously scented blossoms; it is a splendid thing when planted out in a conservatory border, and grows very fast. 8. *Tecoma jasminoides*, a very free flowerer upon the young wood from July to the end of October; it has much divided leaves, and bunches of white flowers, with a crimson centre.—*London Hort. Mag.*

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Manure-water for Pot Plants.—Many—indeed most—plants grown in pots may, at particular periods of the growth, be advantageously treated with liquid manure; these periods are chiefly during the time of making vigorous growth, and of blooming. Inexperienced persons, however, are liable to do material injury from using it too strong or too often; or they fall into the other extreme, and derive no benefit from the application. A very useful liquid manure for pot plants may be made by putting the following ingredients into a hogshead of rain water:—two pecks of sheep or deer dung, one peck of soot, and two quarts of Potter's guano; these ingredients are first to be well mixed up to the consistence of paste, with boiling water, and then mixed with cold water. Stir the mixture frequently for a day or two, and then throw in a quart of quicklime; when the liquid has become clear it is fit for use. For all strong growing plants this may be used daily, or every other day—applying it diluted with about one-third of clear water. For heaths, and similar delicate rooted plants, and even for orchids, it will prove beneficial, but to these should not be given oftener than once a week. As before observed, it is only to be used—at least by the inexperienced—during the periods of growth and blooming—*Lond. Hort. Mag.*

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Colored Glass for Hot-houses.—It has been found that plants growing in stove houses often suffer from the scorching influence of the solar rays, and great expense is frequently incurred in fixing blinds to cut off this destructive caloritic influence. From the enormous size of the new Palm-house at Kew, it would be almost impracticable to adopt any system of shades which should be effective—this building being 363 feet in length, 100 feet wide, and 63 feet high. It was therefore thought desirable to ascertain if it would be possible to cut off these scorching rays by the use of a tinted glass, which should not be objectionable in its appearance, and the question was, at the recommendation of Sir William Hooker and Dr. Lindley, submitted by the Commissioners of Woods, &c., to Mr. Hunt. The object was to select a glass which should not permit those heat rays, which are the most active in scorching the leaves of plants to permeate it. By a series of experiments made with the colored juices of the Palms themselves, it was ascertained that the rays which destroyed their colour, belonged to a class situated at that end of the prismatic spectrum which exhibited the utmost calorific power, and just beyond the limits of the visible red ray. A number of specimens of glass, variously manufactured, were submitted to examination, and it was at length ascertained that glass tinted green, appeared likely to effect the object most readily. Some of the green glasses which were examined, obstructed nearly all the heat rays; but this was not desired, and from their dark colour, these were objectionable, as stopping the passage of a considerable quantity of light, which was essential to the healthful growth of the plants. Many specimens were manufactured purposely for the experiments by Messrs. Chance of Birmingham, according to given directions, and it is mainly due to the interest taken by these gentlemen that the desideratum has been arrived at. Every sample of glass was submitted to three distinct sets of experiments. 1st. To ascertain by measuring off the coloured rays of the spectrum, its transparency to luminous influence. 2d. To ascertain the amount of obstruction offered to the passage of the chemical rays. 3d. To measure the amount of heat radiation which permeated each specimen. The chemical changes were tried upon chloride of silver, and on papers stained with the green coloring matter of the leaves of the Palms themselves. The calorific influence was ascertained by a method employed by Sir John Herschel, in his experiments on solar radiation. Tissue paper stretched on a frame, was smoked on one side by holding it over a smoky flame, and then while the spectrum was thrown upon it, the other surface was washed with strong sulphuric ether. By the evaporation of the ether, the points of calorific action were most easily obtained, as these dried off in well defined circles long before the other parts presented any appearance of dryness. By these means it was not difficult, with care, to ascertain exactly the conditions of the glass, as to its transparency to light, heat, and chemical agency (actinism.) The glass thus chosen is of a very pale yellow green colour, the colour being given by oxide of copper, and is so transparent that scarcely any light is intercepted. In examining the spectral rays through it, it is found that the yellow is slightly diminished in intensity, and that the extent of the red ray is affected in a small degree, the lower edge of the ordinary red ray being cut off by it. It does not appear to act in any way upon the chemical principle, as spectral impressions obtained upon chloride of silver are the same in extent and character as those procured by the action of the rays which have passed ordinary white glass.

This glass has, however, a very remarkable action upon the non-luminous heat-rays, the least refrangible caloritic rays. It prevents the permeation of all that class of heat rays which exist below and in the point fixed by Sir William Herschel, Sir H. Englefield, and Sir J. Herschel, as the point of maximum calorific action. As it is to this class of

rays that the scorching influence is due, there is every reason to conclude that the use of this glass will be effective in protecting the plants, and, at the same time, as it is unobjectionable in point of colour, and transparent to that principle which is necessary for the development of those parts of the plant which depend on external chemical excitation, it is only partially so to the heat rays, and it is opaque to those only which are the most injurious. The absence of the oxide of manganese, commonly employed in all sheet glass, is insisted on, it having been found that glass, into the composition of which manganese enters, will, after exposure for some time to intense sunlight, assume a pinky hue, and any tint of this character would completely destroy the peculiar properties for which this glass is chosen. Melloni, in his investigations on radiant heat, discovered that a peculiar green glass, manufactured in Italy, obstructed nearly all the calorific rays; we may, therefore, conclude that the glass chosen is of a similar character to that employed by the Italian philosopher. The tint of colour is not very different from that of the old crown glass; and many practical men state that they find their plants flourish much better under this kind of glass than under the whitest sheet glass commonly employed.—*Gardeners' Chronicle.*

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Holkam, the Seat of the Earl of Leicester.—This magnificent place has been hitherto known to the public chiefly for its agriculture, and the princely hospitality of its owners. Men of all countries have been here to learn the arts of rearing the best breeds of cattle, and of turning the soil to the best account; and no one doubts that the examples here given have been the means of stimulating many throughout the world to carry out similar improvements. There is, however, an additional lesson very legibly displayed here, which proprietors would do well to attend to—I mean its foresting. Trees anywhere, in good land even, are triumphs; they are looked upon as such in rich sheltered valleys, on slopes with mountains at their back; but to have them of commanding stature, in defiance of every obstruction, soil, situation, climate (a biting sea air in this instance,) is an achievement which ought at least to be noted and commended to all who have lands similarly situated. The late Sir Fowell Buxton took the hint, and not the least of his legacies was a series of thriving plantations stretched along the side of the German Ocean at Runton and Trimmingham.

Holkham, "on an open, barren estate, was planned, planted, built, decorated and inhabited in the middle of the eighteenth century." Such is the record over the entrance door into the hall. Ceres and Sylvanus have now their temples here; and it would be difficult indeed to find an estate over which cornfields and woodlands are more judiciously interspersed. The sale of the timber alone realizes about £4300 yearly.

The chief object of this notice is to draw the attention of land proprietors who have poor lands near the sea, to a grand feature at this seat, caused by the introduction of the Evergreen Oak (*Quercus ilex.*) It is here, as a timber tree, magnificent beyond example in this country, and in the greatest profusion. Its appearance in the Holkham woods, proves two things: 1st, that the tree is well suited to dry exposed soils within the influence of the sea air, as has been frequently stated in the Chronicle; and 2dly, that on chalk bottoms it is entitled to a place beside the Beech. In the Obelisk wood here, a great part of which is on chalk, it is in several instances intermixed with the common English Oak, which it surpasses both in height and bulk, growing luxuriantly after the latter has ceased to thrive.

Of the Evergreen Oak as an ornamental object, especially in autumn and throughout winter, it is unnecessary to speak. The only hindrance to its more general cultivation is its high price, and the uncertainty of its growing when transplanted. I am happy to say that Mr. Gorrie, the forester here, has the merit of obviating the latter objection, and with it the former will, no doubt, be considerably modified. He transplants the seedlings about midsummer, a plan which has turned out to be completely successful. Following his recommendation, I had several hundred put into small pots in the latter part of June, and I now find that they are not only all alive, but have made a second growth. Those who are in the practice of raising seedling Ilexes, will have observed that they complete their first firowth in June, and that towards the end of the month the buds assume the appearance of maturity, the leaves becoming rigid and glossy, and that the whole plant is apparently prepared for winter. A few weeks elapse, and it is observed that they commence to shoot with renewed vigor, making in some instances about six inches of additional wood. It is during the interval of rest, therefore, that the plants should be removed. It is of course necessary to shade them from sunshine, and to water them copiously for a week or so after being transplanted.

All who visit this seat, and are interested in this tree, had better ask particularly for the Ilexes in the Obelisk wood; for after walking forty miles, a few years since, for the purpose of seeing the best trees, those only on the lawn in front of the house were shown to me. They are certainly fine, spreading, park-like objects; but the others are majestic and forest-like, and almost justify the extravagant language of Pliny, when writing of the species as it grew about Rome. One tree in this district measures fifteen feet in circumference at a foot from the ground; another is eight feet four inches, in circumference, has twenty-eight feet of a clear bole, and is seventy feet high: a third is nine feet in circumference, has a clean bole of twenty feet, and is seventy-five feet high: another is twelve feet in circumference and covers a space of twenty-two yards in diameter.

The usual approach to this seat, on the Fakenham road, is skirted with thriving young trees of the Araucaria and Cedrus deodara, which in a few years more will be large enough to confer a striking and graceful effect. A considerable number of the latter has been raised from seed by Mr. Gorrie, and it is intended to plant them on an extensive scale, both as ornamental objects and forest trees. The Araucaria grows here without the slightest protection during winter; and it will be interesting

to those who are about to plant within the influence of the sea, to know that they may safely include the Laurustinus as a shrub which will succeed well in such places. Here it is used in some instances as a hedge plant, and in this capacity, it stood throughout the last severe winter without being injured.

The whole sylvan picture at this seat forms a profitable study. The lesson is, this great woodland, its beauty, the shelter it gives to bleak lands, and the splendid revenue derived from it, may be repeated elsewhere through diligence and perseverance. Nature is the same to all without distinction; and if we find her in any instance wearing a richer or more valuable garb than she displays over other lands similarly circumstanced, it is only because her favors have been in that instance sought in a more liberal spirit. Draining, subsoiling and manuring, are amongst the petitioners whom she always answers.—*G., in Gard. Chron.*

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What Green Tea is?—Mr. Fortune's *Wanderings in China* has reached a second edition, as it deserved. The present issue contains some important additions relating to tea, the chapter on that subject having been rewritten, and much extended. Mr. Fortune is of opinion, that in China, the home consumption of tea may be estimated at eighteen hundred millions of pounds, and states, that in addition about ninety-five millions of pounds are exported.

Among other useful matter, we are glad to find Mr. Warrington's valuable and interesting paper on the chemical analysis of tea, reprinted from the "Memoirs of the Chemical Society," where it only meets the eye of chemists. This gentleman has not only removed the whole of the colouring matter, or glazing, from green tea, but he has been able to analyze the matter removed, and to prove it, by chemical evidence, to consist of *Prussian blue* and *gypsum* principally. So that in fact the drinkers of green tea, as it comes to the English market, *indulge in a beverage of Chinese paint*, and might imitate the mixture by dissolving Prussian blue and plaster of Paris in hot water. The Chinese themselves do not drink this painted tea; they only sell it!—*Lond. Chron.*

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Crops in France.—*Paris, 4th August*, 1847.—The appearance of the Potato crops in this neighborhood is everything that could be wished, the vegetation is everywhere luxuriant, and promises an abundant harvest, scarcely any signs of disease have appeared, and even where seen so modified as to cause little or no alarm; at any other time it would have passed altogether unnoticed; in fact, there was but very little last season, compared with 1845, and now it is almost unknown,—I speak of the present moment, and the cultivation round Paris. My own observation leads me to believe that there has been a very considerable increase of ground planted this year; this was to be expected from the high price they fetched in the autumn and winter, the probable increased consumption in consequence of the high price of provisions and the many purposes to which they are applied in France; the enormous rise in the price of bread since the autumn was another inducement to plant as largely as possible; the result has justified the experiment; the yield of the early sorts is fully equal, if not more than an average; at the present time the very best new potatoes are selling at about 1s. 6d. the English bushel, while bread is 10d. the four pound loaf; whereas, in the early part of the winter, they were selling at 3s. and 4s., and bread was then 9d., a difference so considerable as cannot fail to have effect in still further reducing the price of the main staff of life. The markets are abundantly supplied with both round and kidneys of good quality; it is doubtful if they ever were finer. I have not seen a single diseased Potato in the markets, although I have been on the constant look out; in most of the country markets they are equally good. As to the late kinds, I have, from time to time, carefully examined the growing crops, and assert, without fear of contradiction, that they are as fine as it is possible to desire, and that, at the time I write, there is no appearance of disease, or scarcely none; the foliage is everywhere green and luxuriant, a tainted leaf is rarely found, certainly not more than are usually seen from the effects of thrips and other invisible insects. I am in almost daily intercourse with persons from different parts of France, who from their position, are well acquainted with the subject, and the general belief is, that there has been, and is, but very little disease this year, that it is not upon the increase, and almost entirely confined to damp and cold soils, and entailed by planting diseased tubers. I think it is the universal opinion here that the crops of Potatoes throughout France are—1. But very little affected by disease; 2. That there will be more than an average yield; 3. That there has been a far greater quantity planted than usual.

So far the prospects are cheering; and should it please Providence to continue the fine weather for another six weeks, all hearts will have cause of thankfulness; for almost every species of vegetable production is equally abundant. The Wheat harvest is over in the south, and commenced in the north, and was never known finer. The Minister of Commerce has just made publicly known, by official returns, that there is more than an average, and the present splendid weather will permit it to be housed in good condition. As to the fruit crops, they are absolutely superabundant; the quantity of Apples, Pears, Grapes, Apricots, and Plums, are incredible; the trees are falling under them. The vintage will be abundant and of first-rate quality; the early Black Grapes are now changing color in Paris, and will, no doubt, be in the markets by the middle of the month. Good Apricots have been selling at 3 and 4 francs (2s. and 6d. and 3s.) per 100; fine green figs are now sold in the streets at less than ¼d. each; it was the same with the earlier fruits, such as Strawberries, Cherries, Raspberries, Gooseberries, and Currants. During last month fine May Duke Cherries were often sold at ¼d. and 1d per lb., and Currants at 1d. and 1½d per pint. *Gardener's Chronicle.*

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Saving Seeds.—It has often occurred to me, that sufficient care has not been exercised in saving seeds of vegetables from the finest parts of the crop. If we breed live stock of whatever kind, we invariably select the parents from the best of ou

flock or stud. So with regard to flowers, no one would sow seed from inferior flowers, but would select from the best specimens; and it is by following up this system, even without more crossing than is performed by nature and the bees, that great improvements have been made. Thinking the same effects would accrue from a more careful selection of *culinary seeds*, and that a much greater degree of productiveness might be attained, about three years ago I began an experiment with Long-pod Beans. I carefully selected the finest and fullest pods for seed, taking none with fewer than five beans in each. Next year I had a good sprinkling of pods with six seeds in each; these were saved for seed. The following year there were many six seeded pods, and some with seven. Following up the same plan, I find this season many more six and seven seeded pods, and some with eight seeds! There are still a few plants which produce five-seeded pods; and it is worthy of remark, that the five-seeded plants have seldom a six-seeded pod upon them, but all fives; on the contrary a six-seeded plant generally has nearly all the pods bearing six beans or more. As the seed-saving season is now at hand, perhaps these hints may induce others to adopt the plan. If the same thing were adopted with our grain crops, by selecting a few of the largest and best filled ears to save as seed, I have little doubt more productive varieties might be procured. *Lusor, in Gard. Chron.*

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Culture of the Vine.—Much has been written on the treatment of the Vine, and yet we may read every day of shrivelling, shanking, rust, red spider, and similar complaints, without possessing any certain cure for these evils which occur repeatedly. That a good border is an essential requisite in the production of good grapes, I think every body will admit, but at the same time I maintain that air is equally essential in maturing and coloring the crop. In forming a new border, I should recommend the soil to be excavated to the depth of three feet, not more; but the wider the border is the better; twenty feet is not too wide. There should be a drain in front, and the border should slope well to it. I would bottom with rough sandstone, or some material that would secure perfect drainage; and I would cover the latter with thin turf or peat, to prevent it from being choked up. As compost I would recommend one-fourth old mortar, bones and charcoal—the bones and charcoal to be broken, but not too small; one-fourth decomposed tree leaves, and the remaining half the top-spit of a good old pasture or common, which should at least have lain in a heap for twelve or eighteen months, and frequently turned and exposed as much as possible to frost. The whole being well incorporated, proceed to fill in the border, taking care to tread as little as possible. Rather allow the soil to settle of itself, which will render the border more porous. For planting the beginning of May is, perhaps, the best time. Plant one vine immediately under each rafter, a position in which more light is admitted to the foliage. I remember seeing vines belonging to the Right Hon. the Speaker, which reached the top of an eighteen feet rafter the same season. In this case the vines were planted in the beginning of May. The border being now made, and the vines planted, I will give some account of their management.

I believe that houses after houses of grapes are ruined by keeping them too hot at night, and not giving them sufficient air during the day time. Mr. Mitchell, of Kemptown, Brighton, who is celebrated as a grape grower, ascribes his success entirely to extensive airing, and low temperature at night—forty to forty-five degrees is not too low for night temperature, which might be even a little lower. Abundance of air should be given as early as possible in the morning, to dry up all moisture, thereby preventing scalding and burning—evils so often complained of. Water and liquid manure are also necessary in vine culture. In hot dry weather, water every other day. The border being porous, will allow the water to pass through readily, and will carry the surface heat down to the roots. This should be discontinued when the grapes begin ro colour, and at that time discontinue moisture inside; for the stalks of the berries are apt to become black if much moisture reaches them after that time. I do not hold with syringing vines after they have broken; they obtain sufficient moisture otherwise, provided the flues or pipes are frequently sprinkled. To show that air is the grand secret in grape growing, I will cite an instance. I once visited a friend who had the care of a large establishment. With feelings of pride, he showed me a house of grapes eighty feet in length which was really a grand sight. They were chiefly Muscats which had set beautifully. The house was oppressively hot, the thermometer in front registering eighty degrees and consequently at top the house must have been much hotter; I pointed this out to him, but he shook his head and gravely assured me the contrary would not do, having a cold wet border to contend with. But mark the sequel. I paid him another visit afterwards, when the Grapes were ripe; the berries were not larger than marrowfat peas; scarcely a bunch but what was shanked; and generally speaking, only the shoulders had ripened, while in a small house in which Pelargoniums and other plants had been kept, and which had been consequently well aired, the bunches were large, averaging one and a half to two pounds each. On inquiry, I was told it was the border that had produced the difference; but I could see nothing different from the other in that. In fact my friend had hoodwinked his judgment in order to retain his prejudice, a circumstance of too common occurrence. Once more then let me impress on all the necessity of giving air in abundance. This advice is no wild theory, but the result of long experience and careful observation. Finally it is to be hoped, that when Potmaise becomes better known, and its merits appreciated, we shall hear no more of many complaints which attend the present system of vine growing. *A. B. in Gardener's Chron.*

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Earthing up Potatoes.—I have long had doubts relative to earthing up potatoes being a beneficial practice, and I am now convinced that it is detrimental. The variety employed in my experiments is the pink kidneys. All the sets were planted at the same time, (the first week in April,) in rows

two feet apart, and eighteen inches in the rows, and taken up this day (Sept. 24,) and weighed. The average of all my experiments gives exactly an increase of one-fourth in favor of not earthing up; but some of the plots gave still more, viz., as 42 lbs. is to 31½ lbs. The experiment has been made on a sixteenth of an acre of good deep loam, with a cool moist subsoil. *G. W. Johnson.*

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Heliotropum voltairianum.—*M. Thibaut, horticulteur, rue St. Maur* 45, *Paris,* advertises a magnificent new variety of Heliotrope, under the above name. "Its leaves are of a dark green; its flowers are very fragrant, of a deep bluish-violet colour, (white in the interior.) The panicles are enormous; planted in the open border in May, the clusters of blossoms measure from four to six inches in diameter."

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Raising Thorns from Seed.—In a paper read some time ago, by one of the most intelligent Scotch horticulturists, Mr. Mc Nab, giving an account of a tour in North America, we find the following practical remarks on raising hedges from our native thorns, which we reprint as follows:—

"He was agreeably surprised to see such a variety of native Hawthorns, being convinced of their fitness for forming hedges, so very much wanted in this country, and which many of the inhabitants expressed a great desire to have, instead of the unsightly snake fences which at present separate the fields. But apparently they never thought that the indigenous thorns would answer for this purpose, as they talked of importing haws and white thorns from Britain. Mr. McNab gave instructions to those individuals with whom he had an opportunity of conversing upon the subject, so that they may raise thorns for themselves, as an abundant supply of seeds may be annually procured at no great distance from each settlement. As these instructions may be interesting to others, we here repeat them: 'The fruit should be gathered about the end of October, care being taken to keep the seeds of the luxuriant growing sorts separate from those of the dwarfer kinds. A pit should be prepared about one foot and a half deep, into which the fruit is to be put with a mixture of earth and sand. It should be turned several times during the following season, and if dry a little water may be added; one or two inches of soil being a sufficient covering to insure the decomposition of the pulp. During the succeeding October, a piece of ground should be prepared, and the seed sown as it is taken from the pit, pretty thick, in drills about a foot distant from each other, or in beds three feet wide. In the succeeding spring the plants will begin to appear; at which time, and throughout the season they must be kept clear of weeds. If properly attended to, the seedlings will attain a height of from six to twelve inches the first year. The following spring, the strongest plants may be either transplanted into drills, or placed where they are intended to remain as a permanent fence. The smaller ones should be left in the seed drills or beds for another year, when they may be treated in the same manner. In forming a live fence, the ground ought to be prepared as soon as the snow disappears; by making a trench about two feet broad, and a spade in depth. Along the centre of this trench, the young plants should be put about six or eight inches apart, and afterwards well watered, and firmly trodden in. Care should be taken to protect the young plants from cattle, and to keep them clear of weeds. The second year after planting, the the thorns should be headed down to within six or ten inches of the ground, and each year afterwards switched on both sides to a centre ridge, so as to produce the shape usually termed sow-backed; hedges trained in this form, being less liable to be destroyed by snow resting upon them, than when cut flat at the top.' If the method here recommended be properly attended to, Mr. McNab has not the least hesitation in saying, that an excellent hedge of native thorns may be acquired five or six years after planting. At several places he saw the indigenous thorns employed as a fence; at least they had been planted with that intention, and had attained a considerable height, but from want of proper attention, to pruning and weeding, they were so slender that easy access might be obtained between each stem. From such instances of mismanagement, an erroneous opinion seems generally to prevail, that hedges will not succeed in America. 'But,' he very properly remarked, 'if newly planted hedges in Britain were equally neglected, there can be no doubt that they would soon degenerate, and become no better than those which I observed in the United States and Canada.'"

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Large Fruited Monthly Raspberry.—I beg to send you some Raspberry canes cut off near the ground and placed in pots. The variety is, I think, one of the most valuable introductions we have lately been favored with in that class of fruits. It is, I believe of Continental origin, and may be called the "Large Fruited Monthly Raspberry;" it continues to bear from the end of August all through September, October, and if the frost is not very severe (it does not mind a slight frost) till the end of November. The late heavy rains have injured its flavor slightly; before they visited us it was quite equal in flavor, as you will observe it is in size, to Raspberries in July. To ensure a very abundant crop in autumn, all the canes should be cut down in spring close to the ground, but a good autumnal crop may be obtained, as well as a crop in summer, by leaving only one cane, cut in the usual manner, to each root, cutting the others down closely for the autumnal crop. My plants are now covered with fruit in all its stages, and many lateral shoots are just coming into bloom, so that if grown in large pots and placed under glass, Raspberries may be gathered in December.—[The canes submitted for inspection were healthy and fine, and loaded with fruit, which was, however, unfortunately spoiled by travelling.]—*Gard. Chron.*

DOMESTIC NOTICES.

POMOLOGY IN PHILADELPHIA.—Passing a few hours in Philadelphia lately, we made a hasty visit to our correspondent Dr. W. D. BRINCKLE, who is already known to horticulturists as one of the most zealous of amateur cultivators.

Dr. BRINCKLE's *penchant*, as we were aware, is the production of Seedling varieties of fruit. Hitherto he has been experimenting largely upon the *Strawberry* and *Raspberry*, but he has now turned his attention to the Pear, Apple, and other fruit trees.

His residence is one of the fine houses in Chestnut-st., forming part of the block known as *Girard Square*. Of course, therefore, his gardening operations are mainly confined to the small space comprised in a deep yard of a town house. We confess that when we saw the collection of Seedling fruits assembled there, in various stages of growth, hundreds within that narrow space, and all most systematically arranged—many that had already given surprising results, and a multitude of others that promised well—we found abundant proof how easy it is to bring great results out of small means, and how profitless to the country are thousands of gardens, of the largest size. The limited area before us, only a few hundred square feet, contained a promise of dozens of new varieties of fruit that may be of priceless value hereafter to every one leading a rural life.

Dr. BRINCKLE's plan embraces both *hybridising* and raising accidental varieties from seeds of the finest known sorts. In order not to lose time, and to be able perfectly to control the fertilization of plants under experiment, Dr. B. has been in the habit of having a large number of strawberries, raspberries, etc., in pots. These continue their growth, bloom, are crossed artificially, produce fruit, and the seed is sown, in an apartment in the upper part of his house during the whole winter: thus enabling Dr B. to carry on his scientific experiments throughout the year. In Raspberries he has been particularly successful. The *Cushing*, already made known to the public, is a variety of merit; but one which has fruited for the first time this season—a fine strong plant, eight feet high, with many side shoots, and which, we understood from a friend who is a capital judge, was quite a pomonal wonder in its way, bids fair to eclipse all his other Seedlings. This is a true *yellow* sort, much larger and finer than the white [misnamed yellow] Antwerp, very productive, and of excellent flavor. Dr. BRINCKLE showed us a faithful drawing of this new Raspberry, which he proposes to call Col. WILDER, after the distinguished President of the Massachusetts Society. We hope to be able to give a drawing and description of this fruit in an early number of this journal. When the various new specimens of trees and plants have been tested, those worthy of preservation are removed to a farm some miles distant from the city. Altogether we left Dr. BRINCKLE, and his singularly rich and singularly limited grounds, with the feeling that he is doing as much or more in originating new fruits, in a strictly scientific way, than any other person in the country.

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HOVEY'S FRUITS.—Mr. HOVEY, of Boston, is publishing a work on Fruits, with colored plates, of which we took occasion to speak in favorable terms in reviewing it, in our last volume. In our September number a correspondent in Philadelphia, who signed himself "W.," pointed out certain defects in the work in question, and complained of the disappointment which he and others found in the execution of the work. As, on examining the work more critically, we found his criticisms perfectly just, there was no reason why we should withhold his communication.

Mr. HOVEY, in the last number of his Magazine, complains that our correspondent's criticism was dictated by malice! and that, though dated Philadelphia, the *style* of the criticism denotes that it was written by some one who does not live "many miles" from Boston.

We observe that our *ci-devant* friend, Mr. H., makes all the fruits he describes "rich, sugary and delicious," and keeps the "sub-acid" for his editorials. We assure him, very seriously, that our correspondent is not one of his neighbors, but a denizen of the city of brotherly love. And since he will have it that any one, in this country, who complains [as if it was not an editor's duty to stand fire] must be prompted by malice, we must call his attention, against our better feelings, to the following extract from a review of his "*Fruits of America*" [we wonder how he can sleep o' nights when he thinks of that *title!*] by ROBERT THOMPSON, of the London Horticultural Society's Garden, who certainly must be considered as good and as impartial a judge as any in England:

——"The descriptions are very good; the letter press is got up in a superior manner. But we cannot say so much of the plates. The coloring of these is *decidedly bad*. For instance—in the Beurré d'Aremberg, the yellow employed is not the proper tint of the fruit; but such as it is, it is also used for tinging the leaves. The fruit of the Glout Morceau has a red, which naturally it does not possess. Judging from the specimen before us, chromolithing will not answer for fruits. False coloring tends to mislead—a plain representation is far preferable.—*Gardner's Chron., London, July* 31.

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ERRATA.—In our last number, in Mr. EATON's account of the *Wescott* pear, for "Trescott" read Wescott; for "Niles' Trescott" read *Niles' Wescott*.

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ONONDAGA PEAR.—Specimens of this variety, received by us from Syracuse this season, though large and handsome, were by no means equal in flavor to those which we had last year, and we have the same account of specimens sent to Boston. But as we

formed our judgment on a great number of specimens (uniformly fine in flavor) from several localities in Western New-York last season—and as we are assured that the samples produced this year had not their usual high flavor, we still entertain the opinion that the Onondaga will be found a variety of the first class in all respects.

It will be remembered that in some accounts of the history of this handsome pear in our last volume, its origin was apparently traced to Farmington, Conn. A correspondent in Norfolk, Conn., Mr. BATTELLE, has been investigating this matter with considerable care, and thinks it is not the pear now known there, and considered identical by Mr. CASE and others. We will endeavor to pubish his remarks in our next.

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GRAY'S BOTANY OF THE NORTHERN STATES.—We had the pleasure of looking over the proof sheets of this work while at the residence of Prof. GRAY, Cambridge, Mass., last month. It will fulfil the most sanguine hopes of his botanical friends. Admirable in arrangement, clear and perspicuous in style, and with the characteristic specific traits italicised so as to enable the student to catch the likeness of a species at a glance, this volume will at once become the indispensable manual of every botanist in the country.

The work was announced to be nearly ready last spring; but Professor GRAY'S determination to render it as perfect as possible has, even with month after month of constant labor bestowed on it, delayed it to the present time. In about a month more, however, we learn it will be issued complete from the press. .....

CAMELLIAS BY THE THOUSAND.—Philadelphia has long been noted as the focus of the whole Union for exotic culture. There is still no one of our cities where green-house plants are grown in such profusion as here. The house of BUIST stands at the head of exotic commercial gardens, whether for rare and new plants, or for the immense variety which it comprises. MCKENZIE'S city range is replete with all the more saleable species of the hardier green-house genera, such as may very properly be called window or house plants; and there are a dozen other commercial establishments around the city, where a great trade is carried on in the more popular exotics.

But we were astonished a short time since, on looking hastily through the premises of Mr. JOHN SHERWOOD, on the Schuylkill side of Philadelphia, to see what a business is made of the growing of the Camellia alone, by this energetic gardener. There are several large green-houses, of the simplest construction, devoted entirely to this plant, and we saw it there in all stages of growth. The largest quantity of good saleable plants, two and three years worked, and well stocked with flower buds, that we have ever seen together, are to be found here, and particularly of the most esteemed standard varieties—the Old Double White (the *ne plus ultra* of the genus) in the greatest quantity, and all the other leading sorts in unusual abundance. *Twenty thousand Camellias*, as we were assured there were in Mr. Sherwood's premises, and mostly ready for sale, is a sight worth looking at in its way. The large scale on which the culture of this plant is pursued here, enables purchasers to find plants in Philadelphia, at half or a fourth of the prices demanded five years ago; and our readers who are about filling their private conservatories will no doubt be glad to know where this queen of winter flowers is to be found as "plenty as blackberries."

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THE HYDRAULIC RAM.—Since we drew attention to this ingenious andeffective hydraulic machine for raising water, nearly all the agricultural journals have spoken of it at length; at the American Institute, New-York, the Franklin Institute, Philadelphia, and several other fairs, it has been exhibited in full operation; and the public are now somewhat acquainted with its merits.

In a recent visit to several farms and country seats in Chester and Montgomery counties, Pennsylvania, we saw the hydraulic Ram in operation, and in some places where it had been in use for some time. It is considered there an almost indispensable appendage to a good farm or country seat, supplying the house, dairy, outbuildings, etc., with abundance of water at a cost very trifling compared with the benefits received. What struck us most was the insignificant stream of water, and the small fall requisite to work the Ram. A spring the overflow of which will fill an inch and a half pipe, is sufficient to force water to a distance of several hundred feet and a height of fifty or sixty feet. There is scarcely a country place of twenty acres, where a perpetual rivulet or spring of water may not be found sufficiently near the house to afford an abundance of water either for useful or ornamental purposes, with the aid of this very simple little machine, which is of iron, and works in such a way as very seldom to require attention or repairs. ....

HYACINTHS IN GLASSES.—*Dear Sir:* Will you, in your next number of the Horticulturist, inform a subscriber what is best to be done with the bulbs which have been flowering in glasses through the winter. Should the leaves and roots be removed? Should they be placed away in that condition; or what is necessary in order to preserve them in a healthy state, for use another season? A lady, who expends both time and money in the cultivation of both Hyacinths and Narcissus, etc., is invariably disappointed by finding what has been grown in water one year, so wilted and shrunken in the autumn as to be quite useless and spoilt, will be greatly indebted for some information upon the subject. *New-York, Nov.* 18, 1847.

Remarks.—Hyacinths that have bloomed in glasses are so much weakened that they are of little value. By preserving every leaf and root entire, however, and planting the bulbs when the bloom is over, in good soil in the open border, they will generally recover again in two years so as to be fit for blooming again.

If our correspondent wishes to preserve her roots, she must bloom them in pots of good earth instead of water. We may add while on this subject, that the growth of bulbs in glasses, which appear tardy in putting out leaves, will be promoted by filling the glasses with *warm* instead of cold water.—ED.

Pomological Notes.—*Sir:* Agreeably to your request, last year, I now forward the *Pomme Royale* apple, known with us for an hundred years, judging from the appearance of some of our old trees. It is, without doubt, of French origin, and brought to Rhode-Island, with many other kinds of choice fruit, after the revocation of the edict of Nantes. During the Revolution, a great number of Rhode Island gentlemen removed to Connecticut, and purchased farms, taking with them all the choicest kinds of fruit—among them were a number of my connexions. I have a tree in bearing from Woodstock, under the name of *Pomme Roye*, which is identical with the kind here known by the same name, and this is the apple sent to the Massachusetts Horticultural Society, and by them renamed *Dyer*. One of the specimens sent is from a tree of Dyer's. Within one week from the time Mr. Dyer sent the specimens to Boston, and as a new seedling variety, he found the same apple in my orchard, under the name I now apply to it, but has never corrected the error, as in duty bound.

I also send you specimens of the *White Seek-no-further*—the trees came from Long Island. This is one of the best apples grown, when in perfection, but very unprofitable, is not a good bearer, and with us not one in twenty is perfectly shaped; it keeps not longer than January; the tree has drooping branches, without fruit spurs, very large leaves, and bears its fruit on the extremity of the long naked branches. I have received from Connecticut the *Winter Pomme Roye*, with a description of the tree, and am fully persuaded that it is the same as my *White Seek-no-further* In the form of the trees, my *White Seek-no-further* and my *Pomme Royale* very much resemble each other.

I shall forward to you other specimens of fruit in their season. I am very respectfully your obedient servant. *Stephen H. Smith. Smithfield, R. I. Sept.* 1847.

We print the foregoing from a letter received some time since from the President of the Rhode-Island Horticultural Society, since it contains some important information relative to two or three New England apples, the names of which have been confounded together, and of which we have had some difficulty in obtaining true accounts. We mean the sorts known as *Pound Royal*, *Pomme Royale* and *Dyer*.

From information and specimens sent us from Connecticut, when we prepared our work on Fruits, we supposed the *Pomme Royale* and *Pound Royal* to be the same fruits, and accordingly gave them as synonyms. But on examining the specimens received from Mr. Smith, and from half a dozen other sources, this autumn, we perceive that we were in error. The fruit described in our work is the *Pound Royal*, a winter apple—while the *Pomme Royale* is an autumn fruit very distinct, and of great excellence. This error shall be corrected in the next edition of our work, and those having the present edition will please erase *Pomme Royale*, p. 124, and insert *Pound Royal* as the name of the fruit there described.—Ed.

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The Monstrous Pompone Cling.—We have received from James Dougall, Esq., Amherstburg, Canada West, specimens of that fine old French Cling, the *Pavie de Pompone*, which grows with him in great perfection. They were very large, and of excellent flavor, and more finely colored than the Heath Cling, though ripening about the same season. In the first edition of our work on Fruits, we underrated this magnificent late cling-stone Peach, which we now find in *warm deep soils*, is finer in this country than in France. In the last edition of our work, we have, therefore, corrected our error, and spoken of it as it deserves,

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Old Nonsuch, or Red Canada Apple.—We believe it is not generally known in Western New-York, that the very fine winter apple known as the *Canada Red*, or *Red Canada*, is an old variety, known in New England, and especially around Boston, as the *Old Nonsuch*, for 30 or 40 years past. The apple, as grown at Rochester, is so much improved in size and appearance by the genial soil of western New-York, that it would hardly be recognized by a Massachusetts orchardist, but having our doubts on this subject, last winter we obtained specimens of the *Old Nonsuch* from B. V. French, Esq. of Boston, and found them identical with the *Red Canada*. After this, Mr. Elliot, of Cleveland, sent us the *Old Nonsuch* of Massachusetts grown in his soil, which corresponded precisely in size and color, as well as form and flavor, with the Rochester *Red Canadas*. *Au reste*, we have, the past summer, compared the wood, leaves and growth (quite peculiar) of the *Red Canada* with those of the *Old Nonsuch*, (which latter we have growing under our eye from five different sources,) and find the two sorts entirely identical.

It is singular that the history of this "Old Nonsuch" is involved in so much obscurity. It is not known whether it is a native or foreign apple—though it is certain it is not the *Nonsuch* of present English authors. We have it by this name from the Flushing nursery of Bloodgood, twenty years ago, and it is very well known in all the old orchards of Massachusetts. In New-England, it is rated as an ayple of first quality—though rather an indifferent bearer; but in Western New-York, it is not only large and very high-colored, but quite productive—altogether an apple of the first class.

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A Charming Fall Flower.—One of the prettiest things to be found in the flower-garden in October and November, is the charming little *Sedum sieboldii*, lately introduced from Japan. It forms the most symmetrical tuft of pale silvery foliage and lovely pink blossoms imaginable in the autumn—a well established plant bearing fifty or sixty rounded corymbs of flowers. Although a tender looking plant, it is one of the hardiest of all the herbaceous division, and blooms almost into December, in spite of the most severe frosts. We observed it lately, in several green-houses about New-York, grown in pots, and kept under glass in winter, a care which it does not at all require, for Japan is, in climate, so nearly like our own, that a large portion of its vegetation is perfectly hardy here.

This *Sedum*, like the rest of the genus, is very easily propagated; any bit of the stem taking root as a cutting; and it would mvke a pretty edging to walks in the flower garden.

TREATMENT OF "HOUSE PLANTS."—A "city correspondent" asks "a few hints regarding the treatment of green-house plants, when kept in parlors, especially where anthracite coal fires are kept."

We answer as follows:

1. If possible have the pots *well drained*, and this is best effected, when the plants are shifted, by filling the pot *one-fifth* deep with bits of charcoal.

2d. Never water a plant while the soil appears wet. If the roots cannot take up the moisture as it is given daily, you must give less, or your plants will suffer. Water abundantly when the plants are in a growing state—very sparingly when vegetation is dormant.

3d. In rooms heated by anthracite the pores of the leaves get stopped with fine dust. It is a great promoter of health and luxuriance to cleanse the foliage thoroughly once a week by syringing it with tepid water. While doing this turn the pot on its side, so that the earth may not receive too much water.

4th. Give as much light as possible. A rather low temperature, if uniform, is better than one too high, since it gives healthier foliage, and stronger flowers.

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A HORTICULTURAL SOCIETY'S GARDEN IN AMERICA.—We learn, by a letter from A. H. ERNST, Esq., of Cincinnati, that negotiations are on foot between the Cincinnati Horticultural Society and and Mr. HOFFNER of that place, for the transfer to the society, on very liberal terms, of the fine country residence of Mr. H., to be used as a public horticultural and experimental garden by the Society. The place is about four miles from the city, comprises fifteen acres of ground capitally stocked with a great number of trees and plants, with good buildings, a green-house, etc., upon the premises. Mr. HOFFNER has, for a considerable time, been a most industrious amateur collector, and his place, therefore, is already a fine nucleus upon which to form such a garden as the Society ought to establish.

This is very agreeable intelligence. Not one of our horticultural societies has a garden, though the value of such an establishment, if it were properly managed and supported, would be very great. But in no part of the country would this advantage be so great as at Cincinnati—for that city, being the gardening centre of the whole Mississippi and Ohio Valleys— a country still full of undeveloped resources and destined to become amazingly productive in its gardens and orchards—a public experimental garden would at once be the place for investigating all doubtful points, testing foreign and native fruits, and disseminating these products, and that knowledge which can only be acquired by experience, through the whole of the west.

We sincerely hope, therefore, that the Society may be able to achieve this desideratum, and commence with a carefully systematized plan of operations.

....

PEAR-TREE BLIGHT.—We have suffered but little from the fire-blight in the pear tree this summer. Observation of the character of the two past seasons has confirmed me in the opinion that the sun has more to do with producing this disease than either *winter* or *insects*. Hence I am a believer in the benefit of your recommendation of *whitewash* to throw off the rays of the sun. Respectfully. *A. H. Ernst. Cincinnati, Nov.* 5, 1847.

[The whitewash should be put on at this season; it should be applied warm, with a little glue or sizing, (say a gill to a pailful) mixed with it, to prevent its being washed off by the rain.—ED.]

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OBITUARY—THE LATE MR. SHAW.—We have received the following obituary notice of the late Mr. SHAW, from a friend in New-York, who knew him long and well, which deserves a place in our columns. Mr. SHAW was one of the pioneer horticulturists in New-York, and was well known for his zeal and industry in the cause, by all its devotees there. His first garden, at the corner of Prince and McDougall streets, (referred to below,) was, fifteen or twenty years ago, perhaps, the most perfect specimen of *practical skill* in the art in America. We well remember the magnificent apricots, gooseberries and carnations, which we saw there, at that time, and which we have never since seen surpassed.

Mr. SHAW imported many rare and valuable varieties of fruit, and dissemminated them at a time when there were very few persons in this country, comparatively, who maintained a correspondence for this purpose with European cultivators. The oldest tree of the *Holland Bigarreau*, one of the largest and most beautiful of cherries in the country, which is now growing in our neighborhood, was introduced from France by this horticulturist.—ED.

WILLIAM SHAW, Esq., who recently died at Astoria, L. I., at the advanced age of 77, was, for a number of years, one of our most active and efficient horticulturists. He came over from Ireland in early life, and was for many years an importing merchant in New-York: having experienced reverses in business, he compromised, had a liberal discharge, resumed again, and by industry and the smiles of Providence, was so far successful as to liquidate the remaining claims—conduct as honorable as praiseworthy.

On retiring from the pursuits of commerce, he devoted the last thirty years of his life to the delightful pursuits of Horticulture. Doubtless many of your readers well remember his beautiful garden of fruits and flowers at the corner of McDougall and Prince-streets. Mr. SHAW was one of the earliest and most zealous cultivators of the Isabella Grape. The writer can testify to their great size and beauty on his ample and well stocked trellises, and to the uniform kindness and attention every one received, whom the reputation of his well kept grounds, occupying nearly an entire square in the (then) suburban part of the city, led to visit them. There he also successfully cultivated many of the best foreign grapes in the open air, and the nectarine, apricot and peach also, in a manner rarely equalled in America. His espalier apricots and nectarines were in their season a surprising show of luscious beauty. The advance of the city upward, compelled him to leave his pleasant location, and retreat to the neighborhood of Astoria, near by to

Hurlgate, selecting with his usual good taste some five acres on a tabled eminence, overlooking that "tremendous whirlpool, the Pot" There, in a short time, a little paradise sprung up under his hands—a neat Grecian villa, hedged with the Chinese Arbor Vitæ, the ornamental grounds adorned with the Weeping Larch, Hemlock, Spruce and a great variety of rare ornamental trees and shrubs.

The *Abies* were his favorites; in their culture he excelled, and his success had its influence in decorating with this fine family of evergreens this part of Long Island for many miles round. Mr. SHAW's garden was always a kind of museum both arboricultural and pomological—and many clever lessons in gardening have been silently taught by his successful and tasteful example there.

Mr. SHAW was a profound lover of the country, and one of his especial injunctions to his family was to inter him in a pleasant spot he had himself selected in the village churchyard, hard by his residence. He did not like the thought, of lying, even after death, in the family vault in town; but like the delicate minded WILSON, the ornithologist, he wished "to be buried where the birds would sing, and the spring flowers bloom over his grave"—which request was scrupulously carried into effect at 3 P. M., Oct. 31, 1847. Yours truly. *A Subscriber. New-York, Nov.* 10, 1847.

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THE "IDA" GREEN GAGE.—*Dear Sir:* I have just received the October number of the Horticulturist, and the remarks on the "Ida Green Gage" Plum by Mr. REAGLES caught my attention. It is no seedling of this country; it is nothing more than the true Green Gage itself. The location on which this Plum grows, is favorable to the development of the fine qualities of this best of all plums. I say best of all plums, as I question if any of the plums equal it in richness.

This plum, as I have learned, was imported from France by CHANCELLOR LIVINGSTON, and was obtained from his place—this is the history of it, by the late JUDGE BUEL.

I would advise young beginners in growing fruit, to be a little more careful about christening every good plum that they may happen to find, as a new seedling; and also to take the old Scotchman's advice to his son, "Jock, if you would only hold your tongue, folks might think you were a pretty clever fellow."

I have propagated and sold the above plum for ten years past, as the true *Green Gage* or *Reine Claude*, and in all my intercourse with A. P. HEARTT, Esq., the late proprietor of the garden on Ida Hill, where the trees grow, (as there are a number of them,) I never heard him even suggest that it was a seedling. Yours respectfully. *Jas. Wilson. Albany, Oct.* 5, 1847.

[When the fruit was sent to us, we thought it most probably a Green Gage, though we knew that several persons in Troy, familiar with fruit, considered it distinct. Still we remarked, in describing it, that it was at all events, nothing more than a *sub-variety* of the Green Gage. What Mr. WILSON says, fortified by the opinions of others familiar with the growth of the tree, leaves no doubt that this variety is only the old Green Gage modified by culture in a very favorable soil.—ED.]

RAWLE'S JANNETT APPLE.—In the last number of the Horticulturist, Mr. C. SPRINGER, after remarking that the Genneting deserves a place in your work on fruits, leaves it to you to give it a name, he indirectly preferring the name of *Rockremain* to *Janneting*, as the latter name is applied to several fruits.

There are some two or three apples slightly resembling each other, which are called Gennets. There is, however, but one fruit generally known to cultivators as the *Rawle's Jannett*. It is perhaps the best winter apple in the west—the Newton Pippin not excepted. I am confident that I have heard its name mentioned thousands of times, and I *never before* heard that of *Rockremain* offered; and to substitute that for *Rawle's Jannett* would be a little like turning upside down all the best orchards of the west, especially those of Kentucky. What great and good apple is there, whose name has not been borrowed by two or three aspiring inferiors?

The desideratum of the day is to correct the great confusion existing in pomology, and this certainly is not effected by changing names, for you will not and cannot bury an old name universally received, by bringing forth a new one. To western readers, an author would only be likely to make himself ridiculous, by attempting to change the name of a fruit which with them has been an universal favorite *under one name* for so many years. I would suggest that it retain the name under which it was described by Mr. BYRAM. Yours respectfully. *Geo. H. Yeamar. Mason County, Kentucky, Sept.* 12, 1847.

[It should be the aim of every pomological writer, in describing and publishing for the first time a fruit which is extensively known in certain parts of the country, to adopt the title, if there are several, by which it is most generally known, provided there is no positive impropriety in so doing. Mr. SPRINGER was not, we presume, aware of the universality of the name "*Rawle's Jannett*" at the west, and since it was first described and published by Mr. BYRAM under that title, it should retain it. Fortunately the "Rules of Pomology," now adopted by the leading Horticultural Societies, will hereafter settle and govern all these points.—ED.]

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HORTICULTURE AT BUFFALO.—We have had a fine display at our horticultural fair this season. Our tables have been laden with Pomona's richest treasures. Grapes, peaches, apples, pears, apricots, plums, quinces, &c. have vied with each other in the attractions of size, bloom and color. The season has been one of fruitfulness, the blossoms set well, and many trees which are usually shy bearers have proved productive. The curculio has been less destructive, its habits are becoming better known, and salutary measures adopted to render it ineffectual in its depredations. As a whole the plum crop has been an abundant one. The enterprise that has been manifest during the existence of our society, in procuring all new as well as the old choice varieties of fruit, is now beginning to be

visible, by the display of the fruit itself; and however commendable the enterprise is, we would not base our encomiums so much upon the quantity as upon the quality of specimens. The anxious desire to possess every thing that is new in the shape of fruit trees, because they are so, is not legitimately the great object to be sought for in the results of our horticultural labors, but rather a judicious and proper selection of those which have been tested in their various qualities and found adapted to our localities. And again, we all know there are many fruits that possess an excellence in one locality that is lost by removal to another; and as friend D. THOMAS pithily observes, "three degrees of latitude may produce more than three degrees of flavor." Amongst the apples were the Northern Spy, Swaar, St. Lawrence, Roxbury Russet, Detroit Red, Cabashear, Seek-no-further, Rhode-Island Greening, &c.; and of pears, the Seckel, Glout Morceau, Stevens' Genesee, Summer Virgalieu, White Doyenne, Onondaga, Beurre d'Aremburg, Maria Louisa, Duchess D'Angouleme and Bartlett. These are standard sorts for this locality; truly fine in all respects, and sure bearers. Of peaches we fail, as compared with the New-Jersey growers; our soils are not warm enough, and our late frosts endanger a sureness of crop; yet, notwithstanding, we have many fine peaches. Crawford's Melacoton, both early and late, Red Cheek Melacoton, Red Rareripe, George the Fourth, are, perhaps, among the choicest of those that flourish with us. In grape culture much is also doing. All the hardier kinds are pretty generally cultivated; and several vineries are in the course of building, for the culture of the more rich, but more tender foreign varieties, which, in a season or two, will render us entirely independent of foreign importation. The quince culture has undergone a radical change; the error that predominated, in giving the quince shady and out of the way places, under the fence, &c., with poorness of soil, is now well nigh exploded. The noble specimens that have been exhibited by our enterprising amateur, L. EATON, Esq., measuring 15 inches in circumference, are the result of strong feeding, open position, and well tilled borders. The scrapings of the poultry-house have increased his stock nearly fifty per cent in size. These results of the progress of our infant society are truly gratifying to us, as evidencing a rapidly discriminating taste and skill in horticulture, creditable to our citizens generally, and may be taken as an earnest of our future efforts in this delightful pursuit. I hope you will allow me to say, that it is to the excellent horticultural and agricultural works of our country, (and first among these I must number the Horticulturist, Fruit and Fruit Trees, &c., Cottage Residences, &c.) that we owe much of the impulse towards rural improvement now evinced here. An intelligent friend from New-York, whom I drove through and about the city lately, remarked, "Downing seems to be well known to you all here. Your cottage designs—your mode of painting—your gardening, all bespeak a familiarity with his works." And there are many here not personally known to you, who, nevertheless, almost claim you as a friend, and delight to converse with you through he columns of the Horticulturist. Great interest is manifest in the agricultural and horticultural societies of our own and the adjacent counties, in urging the claims of this city to be the place of holding the State Agricultural Fair for 1848. Numerous resolutions have been adopted, and committees appointed to farther this object, which we trust will be favorably received by our eastern friends. Very truly your ob't. *W. R. Coppock. Buffalo, Oct.* 10, 1847.

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STRAWBERRIES.—I noticed an article signed by "A Subscriber," and dated "Nashville," in your last number. I greatly regret that friend LONGWORTH, so noted for his open manliness, should have attacked me from a masked battery. Being oppressed with the execution of a mass of nursery orders, besides the extensive correspondence of the present period, I can not at this time do justice to Mr. LONGWORTH or myself in any responsive comments; but sir, I design to take up the "Strawberry Question" once more in December, and to combine very many important items, that I think I shall *finish the subject;* and although I am desirous at all times, from feelings of personal respect, to shun collision with the "Hercules" of Cincinnati on any subject, I shall not refrain, when discussing this matter, to point out several errors into which he has inadvertently fallen, including those of his last communication, now referred to. Yours very resp. *Wm. R. Prince. Flushing, Nov.* 12, 1847.

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THE RULES OF POMOLOGY.—*Dear Sir:* I am happy to be able to inform you, that at a regular meeting of our Society last evening, the report of the Fruit Committee, embodying a series of rules to fix the nomenclature of fruits, was, after considerable discussion, adopted by the Society in a body, with great unanimity and much enthusiasm. I enclose the printed report of the committee. Yours. *A Member of the Horticultural Society. Philadelphia, Nov.* 17, 1847.

[We reprint this report, as though the rules are essentially the same as passed at Boston aad Cincinnati, there is a slight difference in the phraseology.]

Report of the Committee of the Pennsylvania Horticultural Society for establishing the names of Fruits.

The Committee for establishing the names of Fruit, beg leave to report:

That, in the discharge of the duties of their appointment, during the past year, they trust they have been in some measure, instrumental in diffusing a more correct knowledge of the true names of the various specimens of fruit, which have been exhibited at the meetings of the Society. They have had, however, difficulties to contend with, chiefly growing out of the confusion which exists in pomological nomenclature. Several names, not unfrequently, have been given to the same fruit, and at times the Committee has been at a loss to determine which should have the pre-eminence. That all embarrasment, in regard to this matter, may be avoided, some standard authority, for the names of fruit, should be recognized by the Society. It is also important that a uniform set of rules should be adopted by the leading Horticultural Societies, for naming new

varieties which may hereafter be formed. This becomes the more necessary, as the attention of Pomologists is, at this time, particularly directed to the formation of new kinds. In order that the exigencies both of the past and future may be met, believing, as we do, that the action of this Society will receive a cordial response from the prominent Horticultural Societies of the country, the Committee, after due deliberation, recommend the adoption of the accompanying Pomological Rules.

The Rules of American Pomology.

1. No new seedling fruit shall hereafter be entitled to a name, or to pomological recommendation, which is not equal to any similar varieties of the first rank already known; or which, if only of second rate flavor, is so decidedly superior in vigor, hardiness or productiveness, to varieties of the same character already known, as to render it well worthy of cultivation.

2. The originator, first grower, or he who first makes known a new native variety of merit, shall be entitled to suggest a name for such variety; which name, if a suitable one, (i. e. coming within the rules of nomenclature,) shall be adopted by the writer describing the fruit for the first time. But if the name proposed is inappropriate, or does not come within the rules, then the describer shall be at liberty to give a name.

3. No new native fruit shall be considered as named, until the same has been accurately described, in pomological terms, by some competent person, conversant with existing varieties, some pomologist of reputation, or the fruit committee of some established Horticultural Society.

4. The description shall embrace the following particulars: The size, form, color, flavor, and time of ripening of the fruit; the texture and color of the flesh; with the addition, in stone fruits, of the size of the stone, adherence or non-adherence of the flesh, form of the suture, and the hollow of the stem; and in kernel-fruits, a description of the core and seeds; the size, position, and insertion of the stalk, and form of the eye; in peaches, the form of the leaf-glands, and size of the blossoms; in grapes, the form of the bunches; and in strawberries, the character of the blossoms, whether staminate or pistillate. And where there is any marked character in the foliage, growth of the young wood, or bearing tree, or any peculiar characteristic feature whatever, the same shall be given.

5. The name of the new variety shall not be considered as established, until the description shall have been published in at least one Horticultural or Agricultural Journal, or Pomological work, of large circulation, and acknowledged character.

6. In giving names to newly originated varieties, all harsh, vulgar, or inelegant names shall be avoided—such as "Sheep-nose," "Hog-pen," &c.

7. No new names shall be given, which consist of more than two words, excepting only where the originator's name is added. Thus all unnecessarily long titles will be avoided, such as "New large black Bigarreau," "Beurré gris d'Hiver Nouveau."

8. Characteristic names, or those in some way descriptive of the qualities, origin, or habit of the fruit or tree shall be preferred. They may be in reference to intrinsic properties, as "Golden Sweeting," "Sans Pepins;" to local origin, as "Newtown Pippin," "Hudson Gage;" to the season of ripening, as "Early Scarlet," "Frost Gage;" to the form and color, as "Verte Longue," "Blue Pearmain;" or commemorative of a particular era, place, or person, as "Tippecanoe," "La Grange," "Baldwin."

9. All superfluous terms shall be avoided: thus, instead of "Thompson's Seedling Beurré," it is better to say "Thompson's Beurré," or simply "Thompson."

10. Before giving a name to a new fruit, its qualities should be decided by at least two season's experience.

11. When two persons have named or described a new native fruit, then the name and description first published, if according to the rules herein indicated, shall have the priority.

12. No person introducing new fruits from abroad, shall be allowed to re-christen them, or give them his own name.

13. In deciding the names of fruits already known and described, until otherwise agreed upon, the latest edition of the "Catalogue of the London Horticultural Society," shall be considered the Standard European authority; and Downing's "Fruit and Fruit Trees of America," the Standard American authority.

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ERRATA.—In the present number, p. 274, *Rules of American Pomology*, Art. IV. for "The form, exterior colour," etc., read "The *size*, form, and exterior colour, the texture and colour of the flesh, and the flavor and *time of ripening of the fruit*," etc.

MASSACHUSETTS HORTICULTURAL SOCIETY.

NINETEENTH ANNUAL EXHIBITION.

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This exhibition took place at the Society's Hall, School-st., on Wednesday, Thursday, and Friday, Sept. 22d, 23d, and 24th, 1847. The Committee of Arrangements entrusted with its management, respectfully submit their Report. The Exhibition, as a whole, was a very good one, but different in its general features from all former ones. There was a deficiency of plants in pots, from the Green House and Conservatory, which always adds to displays of this kind, and to its general beauty and characteristic effect. Whether this is owing to a want of encouragement in the way of premiums, or other causes, is not known. The Committee hope for an improvement in this department at future anniversaries. The Dahlias and Asters were excellent, and the former quite numerous in new varieties and in the perfection of their blooms. The other cut flowers and small bouquets were not as abundant as at many of the weekly exhibitions. The large bouquets for the Marble and Bradlee Vases by Messrs. Hovey & Co., Nugent and Warren, were very showy and well made with fine flowers and evergreens. The large moss and flower designs by Mr. Quant, Mr. Thomas, Mr. Walker, and a floral bower by Mr. McNeil, with a fountain and gold fish, were chaste and pretty. The wreathes by Messrs. Quant, Walker, and Bowditch, were beautiful and well made. The

flower baskets by Miss Russell, and the designs composed of our beautiful native grasses, by Miss Bowker and Mrs. Sparrell, and a moss vase ornamented with the acorn and snowdrop, by "Fanny Forrester," were chaste, and attracted much attention. The variety of vegetables was not numerous, but nearly all the specimens were good. Mr. Cole presented thirty distinct varieties of potatoes, fifteen of which were seedlings, which entitle that gentleman to a particular notice in the vegetable report. The display of fruits was decidedly the best and most abundant in specimens ever made by the Society. The apples were fair, of good size, well colored, and fine in flavor. The variety of Peaches and Quinces was small, and all but one or two of the samples quite ordinary. There were some excellent specimens of plums. In grapes the varieties were more numerous, and the quality more delicious and better matured than on any former occasion.

Mr. Needham was the successful competitor; his Canon Hall Muscats were larger in bunch and berry, than any ever before shown. Mr. Allen had the largest number of specimens, all of which were fine. The Wilmot's Black Hamburgh, by Messrs. Hovey, were extra fine and well ripened, and the collections of Messrs. Young, Donald, and Towne, were very good.

The great feature of the exhibitton was the array of pears, which was undoubtedly the most valuable ever made in this country. The majority of the specimens were rather above their average in size, fair, highly colored, well marked in feature, and of good quality. About fifty new varieties of pears have been fruited for the first time in this country, and it is believed that many of them will prove to be valuable acquisitions, and will hereafter take rank in classes numbers one and two. The new varieties were mostly in the large collections of Col. Wilder, Mr. Manning, and Hovey & Co. The contributions of fruits particularly worthy of special reference, were those from the Pomological Gardens of Mr Manning, Salem, who had two hundred and fifty-five varieties of pears; Col. Wilder, one hundred and sixty: Hovey & Co., seventy, more than half of which were new; J. Lovett 2d, about eighty; Samuel Walker, sixty; Otis Johnson, Lynn, sixty; Winships, Brighton, forty; Mr. Allen, Salem, grapes, pears, peaches, and figs; Mr. Warren, Brighton, grapes, apples, and pears; J. Stickney, peaches, pears, and apples; B. V. French, Braintree, sixty-six varieties of apples; Cheever Newhall, pears; E. M. Richards, Dedham, apples; F. W. Macondray, pears; S. Pond, extra fine Williams' Bon Chretien pears; E. Wight, Dedham, apples; J. M. Ives, Salem, pears; R. Crooker, Roxbury, in particular, extra fine Van Mons Leon le Clerc pears; Horace Gray, by J. Donald, a collection of well grown grapes; H. Vandine, pears, and extra fine Coe's Golden Drop Plum; J. Owen, Cambridge, peaches and apples; J. French, pears; N. Stetson, Bridgewater, fine seedling peaches, and extra fine Crawford's late; Pennsylvania Horticultural Society, pears and apples; W. Stearns, Salem, pears; A. D. Williams & Sons, pears and apples. A remark was made that our nurserymen and amateurs were bestowing too much time and money on the cultivation of the pear to the neglect of the apple. Whether this be true or otherwise, the Committee must leave for the future to decide.

There were four large baskets of rich assorted fruits worthy of particular mention: One from Otis Johnson, containing grapes, peaches, pears, nectarines, plums, apples, &c.; one from Col. T. H. Perkins, by Wm. Quant, with grapes, peaches, and pears; one from A. Bowditch, with grapes in variety; and another from Capt. Macondry, with grapes, peaches, pears, and apples. These were prominent objects upon the centre tables, and elicited much attention from the beautiful arrangements of the various specimens.

The Society was honored by the attendance of Delegates from the Pennsylvania Horticultural Society, Philadelphia; American Institute, New-York; New-York State Agricultural Society; Worcester Hort. Society; New Haven county Hort. Society; Rhode Island Hort. Society; Long Island Hort. Society; Pomological Society, New Haven; Albany and Rensselaer Horticultural Society, and a volunteer delegate from our own Berkshire. These several delegates were duly honored and cared for by the Vice Presidents of the Society. This anniversary has been particularly profitable, as well in the interchange of civilities, as in imparting and receiving much information on subjects of horticulture and pomology, and in the severe tests which many varieties of fruits have been put to before large and intelligent boards of scientific men. Our numerous meetings were thus made instructive as well as pleasant and agreeable in friendly reciprocities.

The weather during the exhibition was favorable, and the hall filled most of the time to its utmost capacity of accommodation, by delighted audiences. It has now been proved to a demonstration, that the hall is not of competent size to contain near all the specimens offered for exhibition; and the Committee owe an apology to several for whom space could not be made for their valuable collections, and which remained unpacked, and were not shown. The Committee name this at the present time in the hope that measures will be taken, at an early day, to secure Faneuil Hall, or some other large building, for the exhibition of 1848.

The Committee trust that the awards of the judges will be satisfactory, and that the premiums have been bestowed upon those justly entitled to receive them.

For the Committee, HENRY W. DUTTON, Chairman.

ANNUAL MEETING OF THE SOCIETY.

THE annual meeting of the Mass. Hort. Society, was held at its Hall, on the 2d of October, when the following gentlemen were elected officers of the Society for the year 1848:

President—Marshall P. Wilder.

Vice-Presidents—B. V. French, Cheever Newhall, E. M. Richards, J. S. Cabot.

Treasurer—Samuel Walker.

Corresponding Secretary—J. E. Teschemacher.

Recording Secretary—E. C. R. Walker

Professor of Botany and Vegetable Physiology—John Lewis Russell, A. M.

Professor of Entomology—T. W. Harris, M. D.

Professor of Horticultural Chemistry—E. N. Horsford.

Committee on Fruits—Samuel Walker, Chairman; P. B. Hovey, Jr., Otis Johnson, David Haggerston, J. S. Cabot, Eben Wight, F. W. Macondry.

Committee on Plants and Flowers—Joseph Breck, Chairman; H. W. Dutton, W. E. Carter, Alex. McLellan, F. A. Story, William Quant, William B. Richards.

Committee on Vegetables—A. D. Williams, Jr., Chairman; W. B. Kingsbury, A. D. Williams, Josiah Newhall, James Nugent, Azell Bowditch, E. C. R. Walker.

Committee on the Library—C. K. Dillaway, Chairman; R. M. Copeland, Joseph Breck, W. B. Richards.

Committee on Synonyms of Fruit—M. P. Wilder, Chairman; B. V. French, C. M. Hovey, J. S. Cabot, the Chairman of the Fruit Committee.

Executive Committee—The President, Chairman; the Treasurer, A. Aspinwall, E. M. Richards, Otis Johnson.

Committee for Establishing Premiums—The Chairman of the Committee on Fruits, Chairman; the Chairman of the Committee on Flowers, the Chairman of the Committee on Vegetables, C. M. Hovey, David Haggerston.

Finance Committee—Josiah Stickney, Chairman, Joseph Balch, F. W. Macondry.

Committee of Publication—J. E. Teschemacher, Chairman; C. K. Dillaway, Eben. Wight, Recording Secretary, Chairman of the Committee on Fruits, the Chairman of the Committee on Flowers, the Chairman of the Committee on Vegetables.

PENNSYLVANIA HORTICULTURAL SOCIETY.

REPORTS OF THE COMMITTEES AT THE NINETEENTH EXHIBITION,

Held 15th, 16th, and 17th September, 1847.

The Committee for awarding Premiums on Grapes, report the following, viz:

GRAPES—*native.*—For the best Isabella, six bunches, to David Ferguson—2d, to Susan J. Smith—3d, to H. F. Felix & Co., Reading, Pa.

For the best Catawba, six bunches, to Samuel Smith—2d, to Henry N Johnson—3d, to Wm. Johns.

For the best Elsinborough, six bunches, to T. Hilliard—2d, to J. B. Smith—3d, to L. Craft—best of another variety of Ohio Grape, to R. Buist.

Foreign, under glass:—For the best named collection, to Wm. Sinton, gardener to George W. Carpenter—2d, to R. S. Field, Princeton, N. J.

For the best Hamburg, four bunches, to Jno. Dougherty—2d, to D. Ferguson.

For the best Frankinthal, four bunches, to Wm. Sinton, gardener to Geo. W. Carpenter.

For the best Chasselas, four bunches, to T. Hilliard.

For the best White Muscat, of Alexandria, four bunches, to D. Ferguson—2d, to Stewart & Bales.

For the best White Frontignac, four bunches, to R. S. Field, Princeton, N J.

For the best of another variety, White Syrian, to William Westcott—2d, to Joshua Longstreth

Foreign, in the open air.—For the best named collection to Edwin Middleton—2d, to Isaac B. Baxter—3d, to J. Comfort.

For the best of black variety, Black Hamburg, to Peter Shuster—2d, to S. J. Henderson—3d, Frankenthal, to J. B. Smith.

For the best of a white variety, White Frontignac, to P. Kane, gardener to R. Price—2d. Golden Chasselas, to A. C. Hyer—3d, Sweet Water, to D. O. Tatum.

All of which is respectfully submitted. E. W. KEYSER, P K. GORGAS, FRANKLIN PEALE, Committee

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The Committee on Stone Fruits, respectfully report that they have awarded premiums as follows, viz:

PEACHES.—For the best. one bushel, of Heath, to J. O. Grover—2d, Seedling, free, to J. E. Scott—3d, Oldmixon, to Isaac B. Baxter.

For the best, one peck, Crawford's late Melecotone, to Chas. Van Sciver—2d, Seedling, Yellow Free, to J. G. Hoffman—3d, Rodman Cling, to Mr. Reeves.

For the best two doz. Crawford's late Melecotone; to Allen Jones—2d, Yellow Free, to J. Tyson.

NECTARINES.—For the best one dozen, Yellow, to John Sherwood—2d, Elruge, to Dr. W. D. Hartman.

PLUMS.—For the best two dozen, to John Anspach—2d, to Thos. Maghran, gardener to S. R. Simmons—3d, Yellow Magnum Bonum, to T. L. Bonsall.

And special premiums of one dollar each, for Peaches, to J. D. Burling, J. Hunter Sterling, W. Johns, Mrs. Physick, James Harrison, and Samuel Caley.

Respectfully submitted. THOMAS M'EUEN, CHAS. P. HAYES, J. H. BRADFORD, Committee.

The Committee on Pears and Melons, respectfully report that they have awarded the following premiums:

PEARS.—For the best and most numerous named varieties, to J. Rutter, West Chester—2d, to J. B. Smith—3d, to Thos. Hancock—4th, to Sam'l R. Simmons.

For the best Seckel, half peck, to John B. Smith—2d, to William Graham—3d, to E. B. Grubb.

For the best Doyenne blanc, or butter, one peck, to John B. Smith—2d, to C. Stephen Smith—3d, to D. Landreth & Fulton.

For the best of another variety, half a dozen, to Isaac B. Baxter—2d. to R. Buist.

For the best half peck of a different variety, to John B. Smith—2d, to Col. R. Carr.

For a fine collection of Pears, a special premium of $1 to S. Maupay—do. to Jacob Snider—do to Lemuel Brackett—do. to Jonathan Tyson.

MELONS.—For the best, three in number, to Woodburn Mulford, Salem co., N. J.—2d, to E. B. Grubb.

For fine Melons, a special premium of $1 to Patrick Gallagher, gardener to Miss Gratz.

WATER MELONS.—For the best Spanish, three in number, to Wm. Brown—2d, to Patrick Gallagher—3d, to Thos. Hancock.

For best of another variety, to Joseph C. Zane—2d, to George B. Roessler—3d, to Isaiah Toy.

For fine Water Melons, a special premium of $1 to Thos. Hancock—do. to E. Starr.

By joint action of the Fruit Committees, a special premium of $5 was awarded to Messrs. Flack, Thompson & Brother, proprietors of Kephart's Fruit Preserver. By means of this invaluable invention, specimens of 24 varieties of Pears, Apples, Peaches, and other kinds of Fruits, which could not otherwise have been exhibited, were placed on the tables. Among these varieties were Apples of 1846—the Moyamensing Pear, the Washington, Pennsylvania, Petre, Chapman, Lodge, and Leech's Kingsessing; the last being a new Seedling Pear of great merit.

A most beautiful and highly interesting collection of Pears and Apples, (embracing 29 varieties,) was presented by the delegation from the Massachusetts Horticultural Society, to a member of the Committee, by whom they were deposited in the Hall of Exhibition. These specimens were fine, and of the choicest and rarest kinds. And the Committee most cordially tender the thanks of the Society to the gentlemen from Boston, for their valuable contribution.

WM. D BRINCKLE, GEO. ZANTZINGER, JAMES BISSET, Committee.

The Committee for awarding premiums on Apples and Quinces, beg leave most respectfully to report that they have awarded the following:

APPLES.—For the best and most numerous named varieties, to Geo. B. Deacon, Burlington, N. J,—2d, to John Perkins, Moorestown, N. J.

For the best one bushel, to Benj. Stiles—2d, to John Perkins—3d, to John Perkins.

For the best one peck, to George B. Howard—2d, to John Perkins

QUINCES.—For the best half peck, to James Harrison—2d, to Thomas Newbold—3d, to Dr. Geo. Uhler.

Also, a special premium of $2 to Dr. R. T. Underhill, of Croton Point, New-York, for the finest Quinces exhibited, having been entered too late for competition.

PETER MACKENSIE, WM. S. VAUX, GEO. B. DEACON, Committee.

The Committee on Vegetables beg leave to report the following list of premiums awarded at the Nineteenth Exhibition:

POTATOES.—For the best. one bushel, to Patrick Gallagher, gardener to Miss Gratz—2d, to Anthony Felten—3d, to Patrick McDonald, Miss Gratz's farmer—4th, to Isaac Stiles—5th, to Samuel Cooper.

For the best Seedling to John Perkins, gardener to C. J. Duval.

For the best Sweet, one bushel, to Ralph Hunt—2d, to Wm. Brown.

BEETS.—For the best, one dozen, to Patrick Gallagher—2d, to Samuel Cooper.

CARROTS.—For the best, two dozen, to David Smith—2d, to J. J. Jennings.

SALSIFY.—For the best two dozen, to David Smith—2d, to Thos. Hancock.

ONIONS.—For the best four dozen to John Austin, gardener to I. B. Baxter—2d, to Anthony Felten.

CABBAGE.—For the best six heads, to Jno. Riley, gardener to the Insane Hospital—2d, to Anthony Felten—3d, to Jacob Engleman.

For the best Red Dutch, to Jacob Engleman—2d, to J. J. Jennings.

LETTUCE.—For the best, to Jacob Engleman—2d, to A. Felten.

ENDIVE.—For the best blanched plants, to John Austin—2d, to J. J. Jennings.

CHARD.—For the best, six plants, to Patrick Gallagher—2d, to A. Patton, Mrs. Kohne's gardener.

CARDOON.—For the best blanched, six heads, to A. Felten—2d, to Samuel Cooper.

CELERY.—For the best blanched, six heads, to Samuel Cooper—2d, to B. Daniels, gardener to C. Cope.

CLLERIAC.—For the best six plants, to Dr. E. J. Rivinus, W. Chester.

EGG PLANTS.—For the best, six fruit, to George Luzenby—2d, to Samuel Cooper—3d, to Robert Henery, gardener to G. Blight.

TOMATOES.—For the best, one peck, to Jacob Engleman—2d, to Patrick Gallagher—3d, to J. Jones, gardener to George J. Leiper.

INDIAN CORN (for table use).—For the best, three dozen, to A. Felten—2d, to John Perkins.

PUMPKINS.—For the best, two largest, to Thomas Field—2d, to Samuel Cooper.

PEAS (green).—For the best and largest quantity, to T. Hancock—2d, to Robt. Kilvington.

VEGETABLES.—For the best display to Anthony Felten—2d, to Sam'l Cooper—3d, to Jno. Austin, I. B. Baxter's gardener—4th, to John Perkins, C. J. Duval's gardener—5th, to J. Jones, G. J. Leiper's gardener.

HONEY.—For the best display, to J. Foulke—2d, to F. Parkerson—3d, to Edwin Middleton.

The Committee have taken favorable notice of the following, viz: several stalks of Buckwheat, a fine sample of six acres on the farm of Com. Stewart, upwards of four feet in height.

POTATOES.—From Joseph A. Burroughs, N. J, Samuel Ott, Joseph Clement, Wm. Parry, N. J., D. R. Harper, Jacob Engleman, and Seedling, by David Ruddack; also a specimen from Tubers, brought from the mountains of Peru, said to be fine—grown on the farm of Francis King.

TOMATOES.—From David Ruddack, Thomas Field, and Charles Hutchinson. Sugar Pumpkin, from Anthony Felten. Valparaiso Squash, from Thomas Field. Sugar Beets, from James S. Peters Scholymus hispanicus, a fine specimen, from Isaac B. Baxter. Honey, from Daniel Trites.

Egyptian Corn, from the garden of Gen Patterson, the seed of which was obtained from a mummy 2,000 years old. A stalk of corn 15 feet high, from the garden of J. G. Whelan. A new variety of Egg Plant, from C. J. Duval, Germantown. A fine display of Vegetables, from Miss Gratz, among which was a new variety of Sugar Pumpkin, a new variety of Egg Plant and Cucumbers.

Collections of Vegetables, by John Riley, from Insane Hospital, Geo. B. Howard, Delaware county, and Caleb Cope.

All of which is respectfully submitted. ISAAC B. BAXTER, EDWIN MEREDITH, WILLIAM JOHNS, HENRY A. DREER, PETER RAABE, Committee.

To the President and members of the Pennsylvania Horticultural Society:—The Committee appointed to award the Society's premiums for Flowers, Designs, etc., at its Nineteeth Annual Exhibition, held on the 15th, 16th, and 17th September, 1847, beg leave respectfully to make the following report, viz:

Dahlias.—For the best 20 blooms, named varieties, to Gerhard Schmitz—2d, to do—American Seedling, parti-colored, to do.—Self-colored, to do.

Roses.—For the best display, six named varieties, to A. Dryburgh.

Russellia Juncea—For the best specimen in flower, in a pot, to B. Daniels, gardener to C. Cope.

Manettia Glabra.—For the best specimen in flower, in a pot, to B. Daniels, gardener to C. Cope.

Hoya Carnosa.—For the best specimen to Robt. Kilvington.

Verbena.—For the best specimen in flower, to Henry Cooper.

Verbenas.—For the best three varieties in pots, to Henry Cooper—2d, to do.

Ferns.—For the best display, in pots, to Robt. Kilvington.

Petunias.—For the best, two specimens, in pots, to B. Gulliss, gardener to J. Snider, jr., Esq.

Achimenes.—For the best display, to Wm. Sinton, gardener to G. W. Carpenter, Esq.

Orchideæ.—For the best display, to James Bisset, gardener to James Dundas, Esq.

Designs formed of cut Flowers.—For the best and most appropriate, to A. Dryburgh, for his representation of a monument, Sir Walter Scott's—2d, to P. Gallagher, gardener to Miss Gratz, for a beautiful Harp—3d, to A. Henderson, gardener to T. W. Smith, Esq., for a handsome Floral Temple—4th, to Alex. Caie, gardener to Mrs. Camac, for a representation of a Flower Garden—5th, to A. Henderson, gardener to T. W. Smith, Esq., for a design of a Rural Fountain—6th, to do., for a Rural Temple—7th, to Peter Raabe, for a beautiful Triumphal Arch—8th, to Joseph Cook, for a Rural Summer Arbor—9th, to Wm. Maupay, for a Floral Design—10th, to, John Sherwood, for a pretty Arbor festooned with Grapes—11th, to Jos. Cooke, for a very pretty Centre Table.

Bouquets for the Centre Table.—For the best and most approved, and for the second best and most approved, none presented.

For the third best and most approved, to P. Carolan, gardener to Samuel Welsh, Esq.—4th, to B. Daniels, gardener to C. Cope.

For the best of indigenous Flowers, to Jno. McIntosh, gardener to R. Kilvington—2d, to R. Henery, gardener to Geo. Blight, Esq.

For the best basket of Flowers, to Mrs. Peter Mackenzie—2d, to B. Daniels, gardener to C. Cope—3d, to P. Carolan, gardener to S. Welsh.

Wreaths.—For the best pair, for festooning, to A. Henderson, gardener to T. W. Smith—2d, to do.

Your committee have to notice, and they do so with unfeigned pleasure, many Designs and Bouquets of cut Flowers contributed from the friends of the Society, from far and near—the names of the respective donors will appear in the Recording Secretary's general report; they cannot, however, refrain from noticing particularly those from West Chester, and to which they have given special premiums. It would be impossible to award premiums to all the Floral objects exhibited—your Committee have, therefore, upon this occasion, endeavored to distribute to the most deserving, and trust that their decisions will be duly appreciated. They recommend the following premiums to be awarded as special ones by the Society, viz:

Fifteen dollars to Peter Raabe, for a beautiful Design in imitation of rock-work, covered with moss and appropriate plants—surmounted by the American Eagle, bearing the following scroll in his beak—"The Horticultural Society's 19th Exhibition." This unique design was placed in the front of the room appropriated for Plants, and added very much to the enchanting *Coup d'œil* on entering this splendid floral saloon.

Five dollars to A. Henderson, gardener to Thos. W. Smith, Esq., for a Floral Chair and Canopy.

Three dollars to Mrs. G. M. Hoopes, West Chester, for a basket of indigenous Flowers, containing upwards of 70 species, beautifully and tastefully arranged.

Two dollars to Miss Annie E. Townsend, West Chester, for a basket of indigenous Flowers, beautifully arranged, and which added very much to the enchanting scene of that portion of the room to which it was allotted.

Four dollars to Mr. Davis Garrett, of West Chester, for a handsome Floral Arch, which added to the scenic effect of the grove on the gallery.

Two dollars to Miss Rebecca L. Reid, West Chester, for a pretty model of Flora's Cottage.

Three dollars to John Dougherty, Laurel Hill, for a handsome Floral Flag.

Two dollars to Mrs. Newberry A. Smith, for two very beautiful basket Bouquets.

Three dollars so Joseph Cook, for a very neat and pretty Heraldric Design, formed of cut flowers.

Two dollars to Mrs. A. Henderson, for a beautiful basket Bouquet.

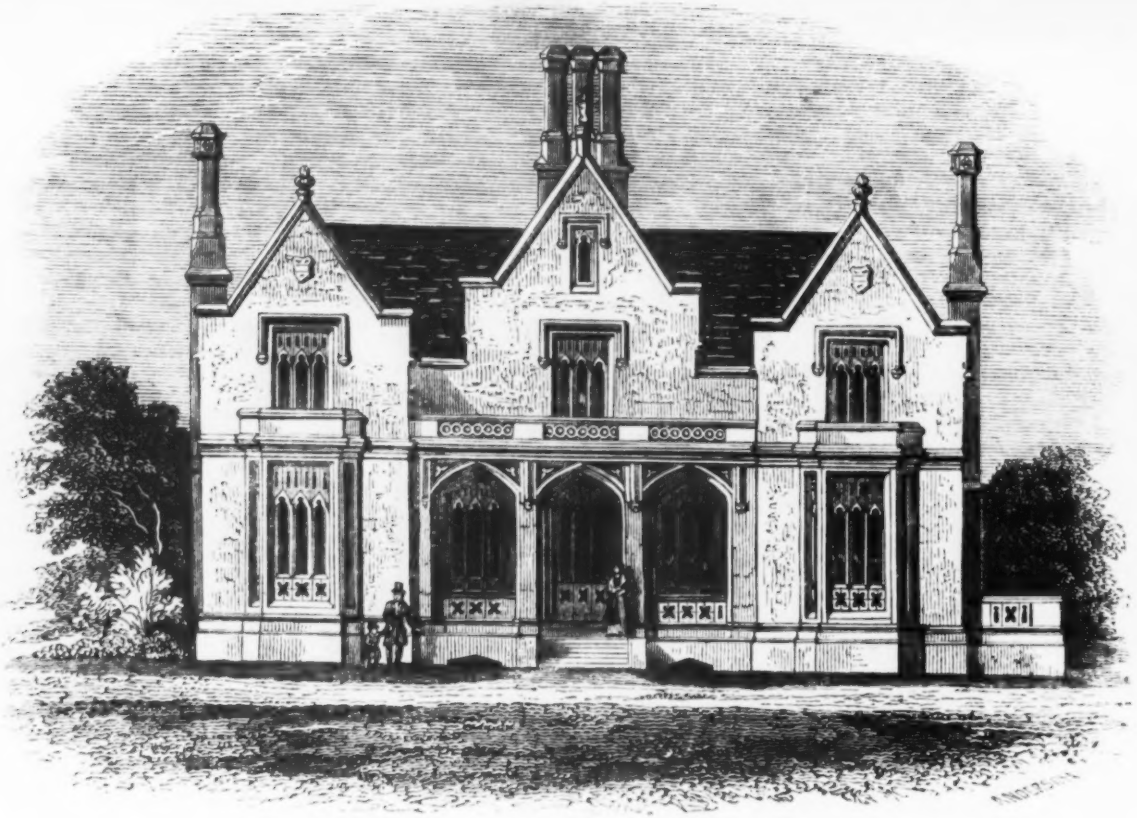
Three dollars to R. Henery, gardener to George Blight, Esq., for a very pretty design of a Harp.

Three dollars to A. Henderson, gardener to T. W. Smith, Esq., for a pair of pretty Vases.

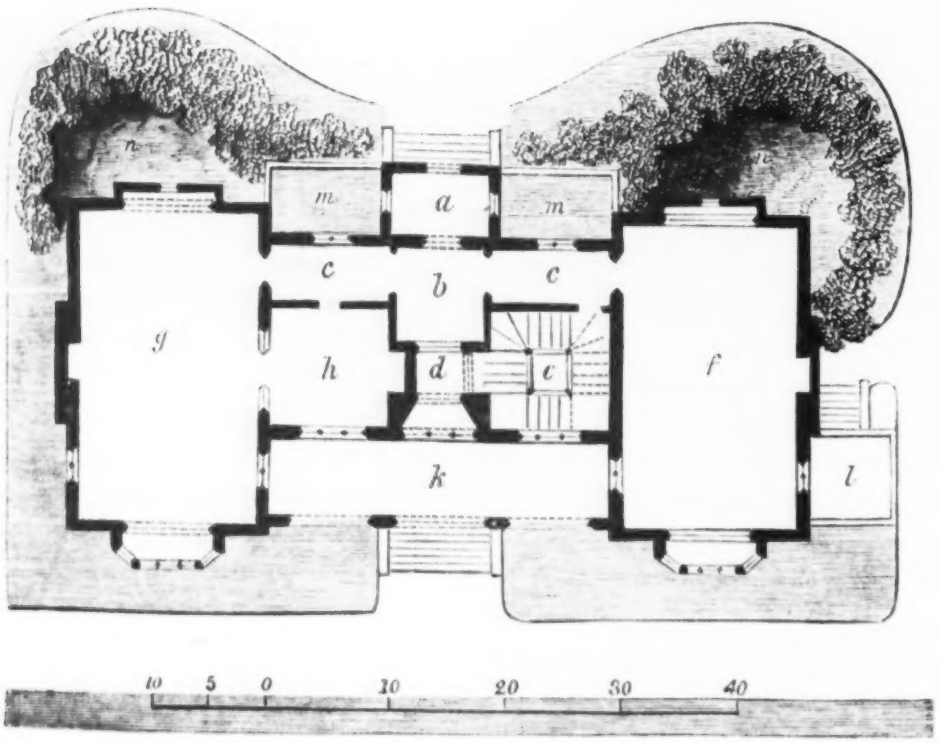
Two dollars to A. Henderson, gardener to do., for a Floral Centre Table.

In closing their report, your committee beg leave to offer their warmest thanks to the Ladies who so kindly attended to the arranging of the Cut Flowers, &c., thereby adding, very materially, by their taste, to the general exhibition.

All of which is respectfully submitted. THOS. C. PERCIVAL, W. H. DILLINGHAM, R. PRICE, GAVIN WATSON, ROB'T BURWELL, Committee.



DESIGN FOR A SUBURBAN VILLA.



GROUND PLAN.